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PERSONNEL AND EMPLOYMENT PROBLEMS IN INDUSTRIAL MANAGEMENT

The Annals

VOLUME LXV MAY, 1916

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THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE
36TH AND WOODLAND AVENUE
PHILADELPHIA
1916

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EUROPEAN AGENTS

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France: L. Larose, Rue Soufflot, 22, Paris.
Germany: Mayer & Müller, 2 Prinz Louis Ferdinandstrasse, Berlin, N. W.
Italy: Giornale Degli Economisti, via Monte Savello, Palazzo Orsini, Rome.
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FOREWORD

Considerations affecting the interests of the personnel are more and more being accorded their proper place in industrial management. The correctness of this policy is accepted by the more progressive and thoughtful employing concerns, not only because social opinion requires that employers should squarely face the human problems in industry, but also because scientific study and attention to the selection and development of, and coöperation with, employes furnish one of the most fruitful present sources of increasing business efficiency.

In order properly to study their own personnel problems, employing concerns are increasingly establishing functionalized departments, similar to other functionalized departments such as that of mechanical engineering in a factory. To do its work properly this division of human engineering should be on a par in importance with the financial, sales or mechanical departments, and its head should be of equal calibre with other executives.

The employment office is usually selected to become this personnel department because its work necessitates such close relationship with the working force. Cases where the duties of the employment office are interpreted thus broadly are rare. Wherever they do exist, however, such departments have supervision over all questions touching employes from the time the employe is hired through all of his career in the plant. It should establish permanent relationships with the sources of supply, frequently suggesting ways of improving them. It should carefully select employes, scientifically fitting them to their jobs, whose requirements they shall in each case have studied. In every way it should seek to stabilize the working force and regularize employment. The physical examination of new and old employes as well as questions dealing with physical conditions in the plant and at the homes of the workers will occupy its attention. This department will have to do with following up the employe after he is at work, increasing his efficiency by adequate training systems and supervising the system of promotions. Social service work, profit sharing, group activities of employes are examples of other phases of its scope. Out of the labors of such an

employment department improved industrial relationships should grow, to the mutual advantage of employer and employe.

This attention to the human problems has emphasized the need for the development of a science of employment and personnel management. This need has manifested itself within the last five years in the formation of at least seven Employment Managers' Associations,—in Boston, New York, Philadelphia, Detroit, Chicago, Minneapolis, and San Francisco. The object of these Associations is to bring together the personnel executives to discuss and pool experiences about their common problems so that some of the wastes experienced both by employers and employes may be eliminated and the personnel function raised to its proper place in industrial management. It is highly important that, as this movement develops, the voice of the worker and the social agencies be prominently heard so that it may fulfill its best possibilities to industry and society.

It is with the idea of describing the development of this movement and assisting the employment managers' associations as well as the many employers who are developing this work, that this volume is devoted to a description of some of the more significant and practical efforts that are now being carried on in this field. Obviously the expressions of individual opinion in these articles may not always agree in every detail with the opinions of the Editors.

MEYER BLOOMFIELD
AND
JOSEPH H. WILLITS,
Editors in Charge of Volume.

THE EMPLOYMENT MANAGER[1]

By Ernest Fox Nichols,
President of Dartmouth College.

The greatest problems in business today compared with the business problems of fifty years ago have arisen from combinations in business and the enormously increased scale of business operations. The growth of system and material efficiency, with better organization, the standardization of plants, of machinery, of processes, of operations, and of products, have everywhere brought increased efficiency and economy of production; everywhere save at the one vital point, namely: the more efficient handling of labor. Personal and human relations between high officers in the management and labor have practically ceased in times of industrial peace. The continuous personal relations possible fifty years ago between men at the bottom and men at the top of the organization are at an end. Sympathetic understanding of one another as human beings, each seeing industry from a different angle, each entitled to a different point of view and opinion, is well-nigh lost.

In the same interval labor, at least skilled labor, has developed in average education, in average intelligence, and in the power to think, in aspirations and workingmen have become ambitious to live fuller lives in cleaner homes, to educate their children better. The value of this change to society and industry is and should be equal. Yet business has been more and more tempted to regard labor as a commodity, and a most vexatious and recalcitrant commodity. Moreover, labor has become highly organized, not for coöperation with capital, but in self-defense against capital, to fight capital. Capital in the past has in some instances taught labor selfishness and certain forms of tyranny. Labor has learned its power to threaten and even to paralyze industry. Indefinite and irresponsible ownership, expansion in scale of operations, failures in handling of men—these have set modern commerce and industry their present greatest and most pressing problems.

[1]An address to the Chamber of Commerce of the United States of America, Washington, D. C., February 8, 1916.

Mistakes due to the loss of control of business by the owners, mistakes frequently due to faulty expansion and combination leading toward monopoly, mistakes in handling men, have all led to one form or another of public interference. Attempts to regulate business by statute, commission, or inspection are becoming more frequent, and yet another phase of this public interference is the organization of labor for defensive and offensive purposes. Every law, and every labor organization, points to somebody's blunder, lack of foresight or sense of justice. Every law and labor union stands for a lost opportunity by some owners or managers. Laws and organizations are born of real needs. If business could have foreseen these needs, and met them, we should have been spared a huge volume of awkardly conceived and often more awkwardly executed legislation and much industrial strife. Business must not only find firmer footing, but it must regain a lost prestige and get back into a better strategical position. Business has grown so rapidly that it has at times exhausted its highest intelligence in the mere processes of growth, and has frequently failed to face and to analyze fundamentally all the factors in its highly complex relationships to labor and the public interest.

The largest problem in business today is not a material problem, not sales or financing, or a further standardization of products or processes of manufacture. Wonderful progress and systematization have been developed in all these material concerns and interests.

The greatest business problem today is the human problem of labor and the wise handling of men. Here lies the greatest opportunity, and also the greatest danger confronting modern business. On the one hand, lie the possibilities of steady production, coöperation, contentment and good will; on the other, the possibilities of strife, of organized social revolt and even the wrecking of the present organization of industry. Syndicalism and socialism, I may remind you, are more than empty shadows. We must look to the future as well as the past.

The failure of many of our industries to deal wisely, humanely, and considerately with labor is shown in various ways. For instance, the United States Census statistics for the calendar year 1904 show in all industries the maximum number of people employed was something over seven million; the minimum number, at another

time of the year, was 4,600,000. At the minimum only 65 per cent of the maximum were employed. That means that 35 per cent were compelled to be idle for part of the time. If we take into account overtime and part time, even greater fluctuations of employment and unemployment occur.

There are some industries, as we all know, that are working only about five months in the year. Think of the waste of capital! Think of the human waste of labor! The hard part of the showing of the census is that the minimum number were employed in January. The largest number were out of employment,—35 per cent, in the cold weather. There are few such demoralizing combinations as poverty and idleness. They will break character, they will break proper habits of living, they will ruin labor. There is only one combination that is more deadly, and that is idleness and riches. We have all of us seen the mischievous work of the destruction of men and women due to both of these groups of conditions.

To work part time is extravagantly wasteful. To employ overtime is to pay more per hour, and each hour is worth less than in regular time. The loss is a double loss shared by the industry and by society, and thousands upon thousands of men and women are wrecked every year in this country through the annual fluctuations of employment.

In this way the industries, in one sense, are killing the goose, and the only goose, than can lay the golden egg. They are making people who should be helpful, helpless. They are making people who should produce for industry and for the state, charges on the state.

The best way to examine the industrial condition of any business is by examining what we call the labor turn-over. The labor turn-over technically means this: If you have an average of 100 employees steadily in your work, and in order to maintain that average you have to employ each year fifty new employees, your labor turn-over is fifty in a 100, or 50 per cent. That, by the way, is a very moderate labor turn-over. It has been known to go as high as 1,000 per cent.

Many men with large responsibility in commerce and industry have not yet reached the point where they know what their labor turn-over is. Yet that is the key to their business.

But the labor turn-over tells you very little unless you analyze it, and you have to analyze it with skill, with judgment, with vision, with trained powers. In short, there should be a man whose profession it is to be able to analyze the labor turn-over, and to find remedies and ways for decreasing it.

Let us see what some of the problems are that are involved in the labor turn-over.

Seasonal fluctuations, or seasonal industries. How can that be met? It may require a different sales policy; it may require coöperation between buyer and seller. But, as long as employment is managed as it is now managed in most industries, there is no hope of bringing that about. Too many of our industries are governed by their sales force. It is a different problem in every industry and in every group of surroundings. There is no general cure for all these things. There must be someone of trained powers on the ground studying constantly and steadily.

The large labor turn-over may in part be due to the wrong selection of employees. How are employees selected in each of the businesses in which you are interested, or of which you are in control? What is the intelligence? What are the human sympathies? What is the type of man or men who hire new employees, and to what extent are they examined for their fitness for this important and particular business?

Another thing which may lead to a large turn-over is fickle reasons for discharging, or discharging on arbitrary grounds. There is more of that done than you would realize until you looked into it very carefully.

Another cause of labor turn-over is unsatisfactory wages; another, hours of work; another, failure to develop employees for fitness; failure, after the employee has been hired, to follow up that employee and see that the fitness which is in him is developed. If there is one operation at which he is put at which he does not succeed, see if you cannot find another; see if you can conserve that man or that woman and bring out of what seems unpromising material a productive worker.

One other cause is the lack of standardization and separation of jobs, so that the employee at the time of his employment does not clearly understand, and cannot be given to understand, exactly what his duties and responsibilities are, and where they stop and

where they begin. Uncomfortable working conditions, crowding, ventilation, light, heat, may lead to an increased labor turn-over if they are faulty. Sickness due to unsanitary conditions of employment is a frequent cause of a large turn-over, and when illness begins, it is not only those who are ill who leave the employment, but others leave with them.

There is illness of a natural sort for which the conditions of employment are not responsible; but if the illness could be found out, could be looked into, if there were medical service in connection with the factory, if there were a trained nurse, if, whenever an employee did not report for work, the employee was looked up at home, it would make a great difference.

Wrong personal methods of handling employees, not treating them with the respect due to men and women, may cause a large turn-over. General discontent, discouragement, distrust or suspicion of the management, lack of a feeling of *esprit de corps*, lack of a friendliness between the employees themselves, failure of the management to show recognition or advancement, or wage increase for better work, are causes. Then there are certain local causes. Such are just a few of the things that enter into the labor turn-over, and a man must be of great talent and judgment and human sympathy and feeling, who will devote his whole time, the whole time of a highly trained and sympathetic intelligence, to go through and analyze and find out what is wrong and how it can be bettered.

Let me give you the results of one employment manager. Fortunately, in this case the man who took upon himself the employment function was a member of the firm, so that nothing stood in the way of the policies which, after due examination and study, he settled upon. The business concern is one in the clothing trade where there has been seasonal employment, where in other shops there is now seasonal employment. In this case the sales policy has been changed. Customers and sellers have agreed to certain modifications of delivery, to their mutual advantage. Certain operative policies have been changed because of the study of the employment manager of the conditions of employment, and this is what he accomplished. In five years he cut down the annual labor turn-over from 150 to 33 per cent. He raised average weekly wages by 37 per cent. He reduced working hours from fifty-four

to forty-eight per week. He cut down his average force from 1,044 to 865. He increased production 42 per cent.

That sort of thing is not charity. It is not sentimental uplift. It comes out in the balance sheet. The man of that quality, with that standing and authority, whose word will be heard in the management, is the man who can not only improve the industry immediately, almost immediately, but he can actually increase money earnings, can provide a fixed and steady personnel, he can so change conditions that work goes steadily forward with only small seasonal fluctuations, so that the whole plant is used every day and there is no overhead charge carried when nobody is at work.

In addition to all that, he has saved to the industry hundreds of laborers and working people. He has saved the state and society from the wreckage which comes from unemployment. The same talent applied in your business could do something of the same sort. Perhaps not so much, perhaps conditions are different. But something could be done. That is an extraordinary showing. But some such showing will be possible if it is taken hold of in an intelligent way, and if the man who is entrusted with the function of employment is given a place comparable to the production manager, or the sales manager, and has direct access to the general manager or the president, and sits in council with the highest administrative officials, so that he has a chance to counsel changes in operation, policy, changes in sales policy, changes in whatever stands in the way of the greater common good of the industry and the employee alike.

This is a new profession. Let me give you one other instance of another kind. Mr. Magnus Alexander very carefully analyzed a group of industries employing all grades of labor. He very carefully inquired into every one of them, the processes of employing, the processes of dismissal, and everything connected with employment in them. These were the conditions that he found. In those industries during the year in which he studied them the total number of employees increased from 38,000 to 46,000. But to get that 8,000 increase, 44,000 people were taken into the business as employees to maintain the staff and to get an 8,000 increase.

Mr. Alexander makes every possible deduction for labor turnover due to unavoidable causes, sickness, death, and all the other things that cannot be prevented, but can only be minimized. He

took into account every item involved, and he comes out with a result that 22,000 of those employees were unnecessarily taken on; and as many left for preventable causes; that is, these changes of employment showed faults in the employment policies of the business. He also computed, after a very careful reckoning—and I am sure that he did not put it too high—that those combined industries, in the employment of those 22,000 unnecessary people, expended $775,000. That is a conservative figure.

We have this new profession, this employment manager. What should be his duties? What should be his qualifications? What should be his training? His work is difficult. You will admit he must not only know how to deal with the present situation, but he has more against him than that. He must allay mutual suspicion and hostility already aroused by winning confidence in his fair dealing with both labor and management. Let me give you something of the qualifications that have been drawn up by Dr. H. S. Person, one who has given this problem more study than I. What sort of things ought an employment manager to do and to be? Dr. Person's answer is found in his article in this volume.[2]

How shall such men be produced in a new profession? There is only one place in the world, the Amos Tuck School of Administration and Finance, where there has been any attempt, as yet, to lay out a course of study which would be helpful to the school training of such an executive. He must get, of course, most of his qualifications in practice. But that he may start out with the proper foundation, courses have been devised, which have been in operation for only half a year. There is no background of experience. We do not as yet know anything more than we have been able to reason out in an *a priori* way, experience will doubtless teach us much as to what to do and how to do it, and what not to do and how not to do it.

But the future of society and industry alike is vitally concerned with the job for the man, as well as with the man for the job. We have heard the cry of business and industry for the man for the job, and now in a quieter voice, but one of growing insistence, which will go on growing, we must find the job for the man; we must discover and develop in the man the fitness for the job.

[2] See pp. 118–21. (This quotation was originally a part of Dr. Nichols' article but has been omitted by the Editors since Dr. Person's complete article appears in this volume.)

How can the Chamber of Commerce of the United States use its very great influence to forward this great movement, equally vital to the success of industry and the success of society? May I make one suggestion, though not a member? The Chamber can do a very great deal by appointing a special committee to study and report on the employment manager, his function, his training, his rank in business. The Chamber can further use its great influence to help to educate business men to an appreciation of the necessity of the functionalized employment head who has to deal with the greatest problems that now concern both commerce and industry.

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THE EMPLOYMENT PROBLEM IN INDUSTRY[1]

By William C. Redfield,
Secretary of Commerce, Washington, D. C.

In a recent conversation with an employer who had under his care over 4,000 men and women in the large factory he directed, he said in substance that when expenditures were made for machinery or materials they were given care that was too much neglected when the matter was one of employing men and women. In buying machines thought was given to the question whether each machine was that which was best suited to its work, whether it had strength sufficient, and whether it was in all ways suited to do what was to be required of it. Experts were employed to advise upon the matter, and much time and money were spent as a matter of course to determine all the facts in order that the investment in the machine might be made wisely. The same was true, he said, as regards materials. They were bought from carefully prepared specifications and thorough tests were made to determine whether the goods were as represented. The specifications themselves were the result of long study to find that material best suited for the purpose.

The gentleman then proceeded to point out that in employing men and women these various things were conspicuous by their absence; that nothing like the same amount of care was usually given to securing the man that was bestowed upon buying the machine or the materials upon which the machine was to work. My acquaintance thought the whole process was incomplete and that we had stopped with one of the most important things left quite undone. He felt that the art of employment was worthy of thought and study as truly as the business of buying, and that there was the same sound reason for having an employment manager that existed for having a purchasing agent and at least as great need for care in the performance of the duties of the one as of the other.

In the business with which I was myself long connected, I was

[1] Revision of remarks before the Employment Managers' Conference, Minneapolis, January 20, 1916.

a spectator of, rather than a participant in, the process of employing, for my own work lay chiefly in the selling department of the business. The head of the house, however, considered it of importance to give his personal care so far as was possible to the matter of employment. He did not like to discharge men. It was his policy not to do so, and therefore he would say the more care was needed in employing them because he hoped not to let them go. This policy was carried out with remarkable success. The force so employed was in many respects a picked one. The changes in it were relatively few, and rarely was a man discharged for cause. The business grew from a small to a large one, and the definite policy of giving special care to the matter of employment proved in every respect successful.

I have always felt that the last concern in the world with which I should want to compete would be that which paid high wages, which sold the best quality of goods, and which had such management as to lead its men upward all the time. I have never found any difficulty, as a salesman, in competing with a cheap shop. The product of a cheap shop is likely to include a large quantity of seconds, and is not usually as large as where men are well paid.

I think I can give you an example of the economy of good wages and good treatment in the case of a factory employing women which I have in mind. In it there are a thousand working girls, 500 each in two rooms. They earn as a minimum wage about one half more than the girls in other mills nearby employing women. As a maximum they earn almost or quite double what other mills pay girls. The conditions of employment are such that the ladies here might wear their white dresses going through the factory, without danger of soiling them. I took my wife there to see it. As a result of those conditions, and of careful selection in employment, with much attention paid to the human value in the shop, that factory sold its goods before the war against the competition of Germany, England and France, in fifty countries all over the world.

My feeling about the fundamental policy of employment is that we often stop short in our thinking. We buy a machine, you and I. We are, as I have suggested, very careful about that machine. In the first place we do not buy the machine unless we understand it. There is not one of us here who would think of

putting an apparatus into our office or shop that we did not understand. That means that we have given attention to the laws of that machine. We know what it can do. We should consider ourselves very, very absurd if we put into our factory any apparatus about which we could say that we had not studied its laws, and did not know how it operated, what its capacity of output might be, to what extent it would bear overstrain. You would not run a paper machine in a dusty place. A man would be considered foolish, to say the least, to do that; and there are other delicate machines which you are especially careful to keep dry, and in other respects to keep guarded and cared for. How many of us apply the same kind of thinking to the man or the woman we take into our shops, so infinitely more complex a machine than the loom or the shaper or the planer or the paper machine, an infinitely more complex thing with all sorts of qualities to which most of us pay no attention. In fact, there is a word we use in that connection which by its very use shows the limitation of our thought. We say we employ so many "hands." The very use of the word shows that we do not appreciate the situation. We are not employing "hands"; we are employing brains and hearts and dispositions, and all sorts of elements that make for personality—we are employing them all.

Now, if there is one neglected thing in the employment problem, it is the human capacity for responsiveness. We are all of us perfectly familiar with the human capacity for destructiveness. We feel that ourselves. We do not like it when we are made to do something which was not in the bond. We do not like it, you and I in the office, sitting at our comfortable desks, when something is put up to us to do that was not in the bond of employment. We resent it when we are told to do it under conditions of hardship, with no account being taken of fatigue, or of our physical capacity for the particular thing we are asked to do, with no thought of the infinite complexity of the human element employed. It is the darkest kind of blundering and blindness that too many of us use. Here is a man with all sorts of initiative along certain lines; he can handle a lathe, perhaps, to perfection; but because he was employed as a grinder, for which he has no aptitude at all, we keep him as a grinder. The idea of selection in many of our shops and offices is almost unknown; but a man who is no good at one thing is assumed,

therefore, to be good at nothing, and out he goes, without thought, into the world. About the saddest thing in industry is the fearful procession of the incompetent, who enter and go out of our great mills. But almost as sad a sight is the alleged brain of the superintendent who lets that sort of thing go on indefinitely.

I have in mind two factories, twelve miles apart, in the same line of business. In one of them were perfect equipment, modern buildings and light, and everything physically fine; but the owner of that mill stated to me that he could not get respectable help at any price; and he had signs in many languages in the mill because he had many racial types of help. Twelve miles away in another mill, whose buildings were all that such buildings should not be, no two of them on the same level, whose plant would be an interesting study for the archaeologist, the owner said to me, "I wish you would come down into the factory yard; I want you to see our working girls." I went down in the yard, and he had good reason to be proud of the girls, largely American born, a very fine looking lot of young women. These mills were only twelve miles apart, in the same state. In the factory that I spoke of a moment ago, where there were a thousand workers, it has happened more than once that mothers of wayward daughters would bring them to the superintendent and ask if he would take them into the mill, that they might have the benefit of the influence of the good girls working in that mill. On the office desk in those works stands a silver vase, presented to the owner, when 80 years of age, by the entire working force of the factory. This is only forty miles away from some of our great mill centers where that which takes place is sad as regards the sweetness and purity and dignity of womanhood.

I took Mr. Roosevelt through one of these factories of which I speak, one day, and he talked to a man named Henry. Henry called another Henry whom he introduced as his son. He said, "I expect in a few years we will have the third Henry here—my grandson—who is just growing up and he is coming into the shop." A very interesting object lesson of what was hoped to take place—three generations at work in the same factory at the same time.

A great deal is said of welfare work in our factories, and under this head much is done that thoughtful people must admire, and, so far as they may, emulate. There is a feature of so-called wel-

fare work, however, which has objectional phases. I do not think it is wise for employers to impose their own ideals of welfare upon their employes. I do not think that any amount of welfare work can ever take the place of a righteous wage or compensate for its absence. A beautiful hospital in the shop does not make good a scanty purse in the home. This is not a slap at hospitals but a slap at the scanty purse. If the purse is properly filled and the hospital is needed, by all means let us have both. The first and foremost welfare work is the payment of a living wage.

It seems to me that the sound philosophy for welfare operations is to proceed *pari passu* with the developing desires of the employes for them. I do not quite know why I have the right to impose my ideas as to sanitation and cleanliness upon others. There is of course the privilege of reasoning on these matters, and the power of courteous argument is a proper one at almost all times and places. It is rather a different thing, however, for me to put my own personal standards in those respects, however good, into such physical form that they are substantially enforced upon others without their desire or choice. A good example of these respects is wholly admirable, but I sometimes think there has been a little bit too much in some cases of the attitude that the workman needed to be taught about these matters by his wiser master and thus be brought to a better standard of living. Perhaps it may be true, but it may not be altogether pleasant or wise to put it in just that way. These things are matters of growth, of education, of evolution, and permanent results are more safely had if the evolution of welfare facilities proceeds step by step with the evolution of the appreciation of them and the desire for them on the part of those for whose good they are intended.

The process I suggest is slow. It is not spectacular. It has little or no advertising value. But it would mean that master and man grew together side by side, and it is consistent with peace and with mutual self respect. Let us meet men fully half way, but let us not try to impose upon them our own ideals, for even if ours are the better ideals they will resent them if imposed from above, and I think they ought to do so.

I heard of a man who gave a splendid clubhouse to his working girls. It was his idea and he meant it in a broad spirit of kindly

helpfulness. The girls used it with much interest for some months. Then it was not used so much, and the use grew less and less. The employer thought the girls ungrateful. A fellow manufacturer said:

> No, they are not ungrateful. The clubhouse is not their clubhouse. It is your clubhouse. They do not want your conception of what they need imposed upon them. They would be thankful for your meeting their real needs, the first of which is a sufficient wage to keep them self-respecting in the world, after which, so far as you can go with them, meeting their viewpoint, well and good, but never impose on them your own idea of what they need. It is not human nature to like that.

DEMOCRACY AS A FACTOR IN INDUSTRIAL EFFICIENCY

By Horace B. Drury,
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Democracy is that condition in a society which encourages self-direction on the part of all members. The idea is as old as antiquity, and has long been favored by the teachings of Christianity. The democratic revolution, however, came in earnest in the latter part of the eighteenth and in the nineteenth centuries. In the field of personal relations, we now call democratic any disposition to respect the opinions and human worth of other people, particularly those less fortunate. In the state, democracy consists in government for and by the people. In a business enterprise, it would mean the power of employes to think, to act, to be heard on industrial matters. Striking illustrations of our varied democratic development and of its hold upon twentieth century life are the rise of the labor movement, England's long postponement of conscription, and America's moderation in dealing with her refractory southern neighbors.

To most persons it will come as a surprise that this democratic tendency of the day should be seriously advanced as an aid to industrial efficiency. Almost all Americans approve in a general way of freedom—for they like it. Especially when it comes to a man's own actions he feels that life is more worth the living if he may do as he wishes. But, at the same time, absence of authority is hardly counted a tangible business asset. On the contrary, the efficiency movement, in both the governmental and the industrial spheres, has perhaps for its central goal the furtherance of discipline, centralization, and expert control. Let the ablest men be placed in positions of authority; let these men collect and invent the best possible methods for every operation; and then let special care be taken to see that everyone follows faithfully the one most efficient method. It may be that this is the very definition of "efficiency" for most of us.

Matter of course though this idea seems to have become, it

is nevertheless here proposed to challenge it. The first test to which our faith in centralization will be put will be an analysis of some of the world's experience in the matter. Most of this part of the paper will be devoted to Germany, it being particularly to the point to dispel the feeling that German experience has vitiated once for all any attempt to find an efficiency in democracy.

The simplest method of estimating the character and value of German efficiency is to compare Germany with England or France. France and England are regarded as the homes of democracy—France, especially, in her philosophy; England in daily life. Germany, on the other hand, believes firmly in bureaucracy and paternalism. What does a comparison of the achievements of the two cultures show? It shows, so the advocates of democracy allege, that all the great modern achievements—the parliamentary system, the eighteenth century mechanical inventions, modern philosophy and literature in its earlier development, the Industrial Revolution, the development of commerce, of navigation, of colonies, modern science—all these originated mostly in England, though to some extent in France. Here the Germans protest. They do not care for ancient history. They are sure that in recent times their country has forged ahead much more rapidly than any other country. What if this should be so—the democrats urge—does it follow that a centralized state, even if efficient in importing civilization, is the kind that can develop it in the first place? Japan and Germany may borrow, but only a democratic people can originate.

Our vision is considerably cleared by these reflections; and yet the method minimizes the importance of certain details. Germany, after all, has made some signal contributions to human progress, especially in the last half century. And, on the other hand, Germany is not as thoroughly undemocratic as one is inclined to assume. A stronger case can therefore be made out by inquiring into the roots of Germany's own progress; for we believe it can be demonstrated that, even in Germany, efficiency has been conditioned by a certain progress towards democracy.

Education, philosophy, and science, for example, constitute one of the great fields of distinctively German advance. But can this be said to be a proof of the efficiency of centralization? Probably the world does not contain anything that is actually freer than

a German university. Her numerous universities are not a part of a coördinated system. Her professors (in normal times) have the greatest freedom of speech and relief from routine duties. Her students may study or not, attend class or not, in fact are their own masters. Professor Schumpeter, of the Austrian university of Gratz, while exchange professor at Columbia once remarked in his engaging way that he preferred the American universities to the Austrian universities, because the Austrian were too democratic. In his view, the professors were too much in the habit of doing just as they pleased, regardless of the will of central authority. We need only append that, despite the Austrian's generous flattery, it is an outstanding fact in the history of economics, Professor Schumpeter's own subject, that for a generation the thought of Austrian professors has led the world.

Again Germany is famous for the splendid management of her municipalities. But here again it must be observed that the German cities are unique in the freedom that they enjoy from central dictation. Great as has been the emphasis recently laid upon the centralized character of Germany's government, the real fact is that through all of the many centuries of Germany's political life (excepting the last forty-five years) Germany has been the one great decentralized power. The failure of Germany to accomplish much during this long period (excepting the Reformation) shows that decentralization does not alone guarantee progress. But, on the other hand, her recent progress has been made under a government whose centralization is conspicuous, rather than thorough. A people's habits cannot be changed in a day. The difference between German centralization and Russian centralization is that the German government has had available for its purposes a great store of force engendered by at least partially democratic institutions. Her empire has in large part meant the union rather than the blotting out of local units. This is true particularly of some of the south German states, and most of all of the cities, that is, if one considers their internal affairs, and not their relation to imperial politics.

In the strictly economic field, the activity of German banking institutions, and the stimulus applied to business by the government itself, would suggest that centralization was an important factor in German success. Evidence from several quarters, how-

ever, shows that her transformation was not effected without a great increase in free activity, and, in fact, was occasioned by it.

Sombart, in his careful review of the economic development of Germany,[1] tells us that in the period between the close of the Middle Ages and the beginning of the nineteenth century the German princes were the chief inspiration of progress. They regarded their territories as their own estates, knew all that was going on in them, and constantly furthered their subjects' interests and industries. Sombart is very explicit, however, in his attempt to forestall the idea that these princes, the dominant authoritative class of their time, were responsible for the making of modern Germany. Credit for this belonged to a new class of capitalists, who derived their opportunity from the introduction of England's "liberal ideas"; that is, England's conception of free industry.

In these days of apprehension concerning big business, it is hard to realize that, compared with what went before, capitalism marks a gigantic step in the direction of democracy. Just as the separation of church from state made for religious freedom and spiritual development, so the separation of industry from the state and from feudal control meant emancipation and progress. Under capitalism, whoever has the funds, or can obtain the credit, can enter almost any business that he wishes, and the pursuit of business is practically independent of outside control. Today, we realize that the system often brings oppression in its wake; but this is an incidental consequence. Capitalism in its innermost nature is one of the most democratic (and at the same time perhaps the most efficient) of all the institutions that the world has known.

Taking up specific German industries, her government-owned railway system would seem to offer the clearest case of centralization. But even here there is no conclusive evidence that efficiency has proceeded from the top down. Sombart notes that in their formative period the German railways were in private hands, and not until the foundations for success had been securely laid did the government take most of them over.[2] He partly spoils his testimony for our point, however, by ascribing to the incorporation of the railway service in the civil wing of the army the present faithful conduct of railway employes, as also that of postal em-

[1] *Die deutsche Volkswirtschaft im Neunzehnten Jahrhundert*, 72–76.

[2] *Ibid*, 281.

ployes.[3] Only under military organization, he thinks, is it possible to attain that perfect discipline and regularity necessary in these services. That he is right on this last point, however, will be doubted by anyone familiar with the privately operated telephone service of various American cities.

Possibly a more typical industry, and certainly one that represents more truly the advance current in German expansion is the chemical industry. German progress here, according to Marshall, may be attributed to "the diffusion of scientific knowledge among the middle and even the working classes of Germany, combined with their familiarity with modern languages and their habits of travelling in pursuit of instruction."[4] Widespread education, however, is democratic in its very nature. The only object in educating the working classes along technical lines is to enable them to exercise greater personal force in industry. Furthermore, the methods of German education make for independent efficiency, not only in the universities, as we have seen, but in the schools for the working class. For these have derived much of their spirit from Pestalozzi, the Swiss educational reformer, whose main idea was that all the powers of the individual should be developed. It is evident, then, that Germany could not have made the great forward strides that she has made in the chemical and other industries without drawing heavily upon the training, initiative, good will, and freedom of her middle and lower ranks.

The German kartels would hardly seem at first glance to be seats of democracy. And yet, if the kartel be compared with the American trust or consolidation, it is apparent that the former is a looser, freer organization. The typical American trust is an amalgamation. Production, as well as selling policies, are controlled from the center. But in Germany the constituent companies retain their independence,[5] combining only to fix prices and outputs. And furthermore, while the German government has sanctioned and become a part owner in some of the kartels, they originated in obscurity,[6] and in only a few cases have been brought into being by the government.

[3] *Ibid*, 320.

[4] *Principles of Economics*, 6th ed., 211.

[5] Sombart, *op. cit.*, 370.

[6] *Ibid*, 368.

Though we have examined at length the influence of democracy in the main fields of German progress, this does not mean that Germany has been very deeply democratic or that the advantages of democracy are there best exemplified. The contrary is the case. But it is a curious and significant fact that in the case of the one nation which most boasts of centralization, of discipline, of bureaucracy, of the overman—a closer view should show that an indispensable element in her progress has been the emancipation of her forces from the rule of authority and the rise to power and free activity of large numbers of her people. It shows that while the German qualities of forethought, perseverance, coöperation, and loyalty to the state (would that it were to mankind!) may be an example to us, these qualities have not yet shown their ability to take the place of democracy; but, on the contrary, their real worth is apparent only when they are supplementary to it. Discipline is neither honorable nor efficient except when in the service of free and intelligent choice.

The conclusion found to hold true in the case of Germany may now be advanced as one of world-wide application. Take, for instance, the administration of colonies. It is remembered that France, Spain, Portugal, and England once all administered their colonies in the interests of the mother country. In some cases —and this was particularly true in the instance of France—they did so under a highly centralized system. All these early colonial systems were failures. England, alone, learned the lesson. Today Canada, Australia, and South Africa are almost as free as the United States; and not only have they been the most prosperous colonies of modern times, but—and this was one of the greatest surprises of the war to those autocratically inclined—they have in emergency rallied to the support of the mother country. Democracy in the management of colonies has proved efficient. It is second in value only to independence.

Or, take that vital test of national efficiency in these days, the ability of a nation to get along well with its neighbors. This means avoidance of dangerous wars, or in case of a dangerous war, effective alliance. No single nation, unaided, could possibly long withstand the world; and national life therefore depends in the last analysis upon the tolerance of a nation's neighbors—or, at least, a part of them. It is too early yet to be certain whether democracy

has surpassed coercion in its ability to form and maintain alliances; and possibly neither league in the present war has made exclusive use of one or the other of these methods. It is plain, though, that for some years past English diplomacy has been more tactful in its consideration of the interests and feelings of other countries, while German diplomacy has made some grievous errors. To the on-looker, it would seem that not the least of the sources of English strength has been her more democratic conception of international relationships; while the German leaning towards self-will has greatly magnified the task before German courage. Perhaps a little more tactfulness on England's part could have prevented the war.

Democracy, on occasion, has leavened the lowest ranks of society. "To the abilities of children of the working classes," affirms Marshall,[7] "may be ascribed the greater part of the success of the free towns in the Middle Ages and of Scotland in recent times. Even within England itself there is a lesson of the same kind to be learnt: progress is most rapid in those parts of the country in which the greatest proportion of the leaders of industry are the sons of working men. For instance, the beginning of the manufacturing era found social distinctions more closely marked and more firmly established in the South than in the North of England. In the South something of a spirit of caste has held back the working men and the sons of working men from rising to posts of command. . . ."

In England, and in the world at large, the history of industrial evolution has been but little more than an account of the rise of free industry. The unconscious beginnings of this great movement—which, in time, was to go by the name of *laissez-faire*—still live for us in the words of Gross:[8]

> Among the silent but great revolutions of English municipal history, the story of which has never yet been adequately recorded, is the wide-spread decay of once powerful boroughs in the fifteenth and sixteenth centuries. . . . . There can be no doubt that the Gild Merchant was one of the most potent factors that led to this revolution. The tyranny of the gilds, which the public statutes of that period so strongly condemn, drove commerce and industry to rural districts and to smaller "free-trade" towns, such as Birmingham, Manchester, and

[7] *Principles of Economics*, 6th ed., 213.

[8] *The Gild Merchant*, i, 51.

Leeds, where their natural, spontaneous expansion was not hampered by ancient privileges. Thus the rigid protection of the older chartered boroughs sapped their commercial prosperity, silencing the once busy looms of Norwich and Exeter, and sweeping away the cloth-halls of York and Winchester.

More general illustrations of the advantages of freedom over direction are the superiority of free to slave labor; the superiority of family to institutional life; the greater efficiency of housewives as compared to servants; the greater strength of character of children who have been allowed to try their own hand in things as compared with those who have been too completely protected.

Our argument, however, should be clinched by something more than historical analogy. Who knows but that the rapidly changing conditions of today have removed some of the advantages of democracy? Surely, they have had some effect.

Looking over the general situation, it is not hard to detect several movements which seem favorable to centralization. Take improvement in communication. The cost of transmitting instructions once forbade centralization,—except in matters of first importance. But of late, better mail service, the telegraph, the telephone, the typewriter, the printing press, the perfection of instruction cards, of forms, the development of trustworthy industrial lieutenants have made it possible for the will of central authority to give commands over extensive areas. Where before detailed direction would have been impossible, now it is both easy and cheap. Again, consider the effect of standardization. The grading and labeling of materials, as cotton and iron, the standardization of tools and of general methods brings it about that large numbers of workmen work under almost identical conditions and, more important yet, under known conditions. This facilitates a hitherto unthought of refinement of instructions. Lastly, a rapid but unbalanced increase in technical knowledge has made some men so much more capable than others that transference of skill has become highly profitable. All these are important changes, and constitute, it would seem, the chief cause of such centralization and advocacy of centralization as the world has recently seen.

But, on the other hand, certain conditions which have hitherto impaired the efficiency of democracy are also being undermined. The most serious menace that could possibly threaten an industry attempting democratic organization would be a lack of interest on

the part of employes in the success of their work. The main reason why scientific management started with an undemocratic turn was because so many modern workmen would prefer not to be efficient. By a pernicious labor philosophy, large output is supposed to cause unemployment. Employers and employes, too, have been so completely isolated from one another that jealousy rather than good will has been the normal attitude. Unless this feeling can be removed, coercion is, of course, more efficient than democracy; for freedom is profitable only when that freedom will be used for good. Today, this lack of interest on the part of workmen is being attacked from many angles. The one condition, however, which will do the most to remove it will be a change in the spirit of industrial management itself, which will make it representative of employes and customers, as well as of capital. In other words, democracy in the ends of an organization removes the one greatest obstacle to democracy in method. And democracy in ends is going to be forced on all sides—and before long.

A second reason why democracy in industry has only been partial is lack of widespread or thorough education. There is little advantage in encouraging workmen to suggest and decide things if they have nothing to offer. Personal power is at the basis of all freedom and of all true democracy. But the future will witness a leveling of educational advantages both as regards academic education and the larger education of life. Not only is common school, high school, technical, and university education on the increase; but agencies such as the trade journal, the convention, moving pictures, and easy travel give the mechanic or small enterpriser advantages formerly enjoyed only by established leaders. Secrecy is on the decline, technical advertising is becoming more helpful, labor more mobile. There can be little doubt but that if one man knows less in the future than another it will be largely because he is less aggressive or less talented. Bad fortune in these respects will not, as formerly, be foreordained for the masses.

A third inefficiency of democracy has been its lack of organization. Waste, lack of unity, competition, duplication have too often undone it. But today we are learning that even without departing from the principle of freedom these weaknesses can be diminished. In the fields of business, politics, religion, and educa-

tion genuine coöperation has made gigantic strides. It now seems that free individuals can coöperate with almost as much unity as though they were all under one common authority. They are, indeed, free to tear each others' projects to pieces, if they wish. But they are learning not to do so. Progress in coöperation is helped by the growing tendency to leave to others—particularly to one's leaders—the making of many decisions. Democracy, too, in time develops its own checks that make it increasingly difficult for an individual to aggrandize himself other than by some net addition to human welfare.

After balancing these developments of the day, one against another, we see no reason to anticipate that the democratic tide in the future will be less powerful or less fortunate than in the past. True, there may be a growth of what many will term centralization. Standardization, system, and the discoveries of efficiency engineers will warrant the establishment of central bureaus and agencies for the coördination of industrial effort. But that in their actual working out the new industrial forms will be less democratic than the old, the immense strengthening of democratic forces now in progress makes very unlikely.

It is now time to lay down a few of the principles which make for the efficiency of democracy. In the first place, let us note how impossible it would be for a few persons to give real life to a complicated industrial system such as ours.

It might be thought that if we could only find the right sort of man for a king, he could tell his governors what to do, they could tell their lieutenants, and the word could be passed on from rank to rank until the manual workers would be directed by the superior wisdom of the good king. But the theory forgets that the king has only one pair of eyes, that he can be in only one place at one time, and that his realm is wide and diversified. In fact, neither the king, nor the governors, nor the lieutenants can know all that is going on. Much as standardization may facilitate the giving of directions, it is doubtful whether it is overtaking the growing complexity of industrial life. Certainly, standardization can never vanquish it. The fact remains, therefore, that all direction cannot come from above; and that the truly valuable workman is the man who can use his head to supplement his hands. After all, it is labor's power to adapt that is at the basis of labor's

usefulness, as distinguished from that of brainless machinery or blind natural force. That industrial system which succeeds in availing itself most largely of the originating capacity in human nature is, therefore, most efficiently exploiting industry's one most necessary and most promising resource.

A second and greater misapprehension on the part of those who would do away with democracy is concerning the mechanism of progress. Progress is largely the product of invention, large and small. It is thought that centralization will reinforce discovery and that it will rapidly spread new ideas. It must be admitted that the opportunities of those high in authority are so great that when it comes to matters especially in their charge they sometimes make more improvements than all others. Frequently no one else is in a position to understand fully the situation. But when it comes to developments radically new, it is more apt to be the other way. Those high in authority under an old system are more or less dubious about change. Furthermore, they are numerically weak, and, having little special advantage, the chances are not one in ten thousand that they, rather than some person having no authority in the matter, will hit upon the fruitful idea. Thus inventions have always come from the most unexpected quarters, and the greatest of world institutions have had, in their beginnings, to fight the persecutions of those in authority. Originating power is widely scattered, no one knows where. An invention, when it comes, is in its very nature a surprise. The only way to gather the full fruits of man's tendency to progress is to allow the greatest possible number to pursue their own ideas, and then trust that the worthy innovation will fight its way through to recognition.

It might be argued further that democracy may count on the will of the worker; that the right kind of democracy is an insurance against revolution; and finally that—efficient or not efficient—freedom is what people want and will have,—which settles it. All these are good points. But sufficient justification for democracy has already been found in the evidence that rigid control is inadequate for mobilizing intelligence. A certain coördination may be impressed from above. But the great stream of intelligence, of adaptation, of progress proceeds from the bottom up, and not from the top down. The top itself is largely recruited from the bottom.

Democracy we have defined as that condition in a society which encourages self-direction on the part of the mass of its members. Such a social order has been condemned by many who feel that the rise of scientific management and of German *kultur* has demonstrated democracy's essential inefficiency. We have endeavored to uncover the error in this idea. The present struggle between Germany and England, between efficiency and the labor unions, is in reality a struggle only between types of democracy, or between that which calls itself democracy and that which does not—but could properly do so. If superficial clashings as to terminology, as to outward form, or national temperament be disregarded, it appears that under all progressive systems alike, the individual is becoming more active; his coöperation is becoming more essential; and his influence is more widely felt than formerly.

This position not being the common one, we endeavored to establish it by reference to the German university system and the German municipal system; by a study of the rise of German capitalism; by conclusions drawn from the building-up of the German railway system, and the German chemical industries; by an examination of the German kartel. Other successes of democracy were recorded,—in the field of colonial administration, and that of foreign relations. As proof of the efficiency of democracy in industry, we noted Marshall's explanation of the rise of north England at the expense of the South; and Gross' explanation of the decay of England's mediaeval towns and the rise of her modern industrial centers. Had it been desired to push the argument further, probably it could have been shown that even in the military sphere, belligerents are now laying more stress upon the valor, intelligence, and initiative of the individual soldier than in previous wars; while surely an overwhelming argument for democracy could have been made had we searched out the causes of the great Russian reverses of 1915.

The promise of a greater future development for democracy was next found in the establishment of a social order more squarely founded upon mutual interest; in the coming revolutionary opening-up of educational opportunities; and in the construction of voluntary associations, capable of coördinating and unifying individualistic endeavor. The inherent merit in democracy was found to

consist in its superior flexibility and in its capacity for progress,—in addition to its interaction with the human will.

In view of these facts, we Americans should not regard our traditional democracy as an outworn system. We should, it is true, always be ready to open up new channels for its life. The demand of the day is for higher standards, for a firmer self-discipline, for a new talent for heeding expert advice. Scientific management and order should be new keynotes for the American spirit. In pushing forward these new developments, however, let us not neglect the basic principle of freedom.

PERSONAL RELATIONSHIP AS A BASIS OF SCIENTIFIC MANAGEMENT[1]

BY RICHARD A. FEISS,

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Given two establishments in the same industry, in the same locality, build for them the same buildings, equip them with the same machinery and establish for them similar methods of handling equipment and materials—yet, in the course of a short time, there will be a difference in both the quantity and the quality of their output. This difference in result will be caused by the difference between the two in the quality of their personnel. For this reason alone the question of personnel must ultimately be considered the real problem of management.

If one of the above plants were headed by a management of the ordinary or traditional type and the other by a management which fully realized the importance of personnel and had developed an active philosophy tending toward the solution of the personal problem, the difference in practical results would be so great as to be unbelievable by the uninitiated. In fact, this difference alone would often spell failure in the one case and success in the other.

The managers of both plants would see the shortsightedness of letting buildings and other equipment run down for lack of upkeep

[1] A paper read before the Society to Promote the Science of Management, Philadelphia, Pa., October 23, 1915.

and repair. Both would see the value of and put into practice means for running the machinery at the most efficient speeds and bringing into use the best tools and the best method of handling material. It would be taken for granted by both that anything that goes to the improvement and upkeep of these things would be a necessary expenditure or a wise investment. The ordinary management, however, would not think of applying the same laws of upkeep and improvement to the personal equipment.

The ordinary or unscientific manager believes that factory management consists of the handling of orders, materials, and machinery, and that the men in the plant are a mere adjunct to these things—a necessary evil. When this type of manager is confronted with the fact that his organization is less efficient than another he will lay the blame on his employees and say, "I haven't the same kind of people that the other fellow has." In making this statement he will be absolutely correct, but he does not realize that the fellow with the other point of view has developed a particular kind of people as an essential part of the responsibility of management.

The old type of management would at the best consider expenditures for the development of personnel as an unnecessary outlay forced upon it by unintelligent public opinion, or would consider it a politic expenditure which would bring a certain amount of cheap advertising at the expense of fair wages. The enlightened, or scientific type of management would consider expenditures of this kind not only wise, but also an investment bringing proportionately larger and more permanent returns than all other kinds. Full value of all expenditures or investments for upkeep and improvement of a plant can be realized only when sufficient investment of both time and money has been made for the purpose of improvement and upkeep of the personal side. In fact, the management which has the correct viewpoint will find that the mechanical and material side of the organization will be better developed as a necessary incident to *personal* development than it would be where this point of view is reversed. This is well illustrated in the Clothcraft Shops of The Joseph & Feiss Company, where this philosophy has been the basis of its development of scientific management.

Only actual comparison of the mechanical and other develop-

ments in this establishment with those in the next best establishment in the men's clothing industry would suffice to prove this point. The industry generally is not in a very advanced state. The usual type of management is at the best only beginning to realize the existence of the personal side. As a result, machinery and equipment are almost universally limited to a few undeveloped or semi-developed types, regardless of whether or not they are most suitable for the purpose in the hands of the individual operator. In practically all these factories you will find only a few types of machines, and these set up and equipped as they come from the manufacturers and running at haphazard speeds. Shears and all other tools are any which the employe chooses to furnish for himself.

In the Clothcraft Shops, working from the personal point of view, tools are not only developed and prescribed with regard to their suitability for the purpose of individual accomplishment, but all tools are furnished and maintained by the management. Fully 50 per cent of the different types of machines in use at the Clothcraft Shops are not, as far as is known, used in any other establishment in the industry, and practically every machine in use has been developed so as to be specially adapted for its particular purpose in the hands of the individual who uses it. In like manner the proper handling of materials and the installation of other methods developed under scientific management have been introduced in this establishment as necessary steps in the development of the highest efficiency of the individual.

We believe the point of view outlined above to be of the essence of scientific management. Scientific management aims directly at increasing the quality and quantity of the output of an organization by increasing the quality and quantity of the output of the individual worker. While scientific management in its application must necessarily go deeply into the question of improved machinery and equipment, and while this in itself makes for greater output, nevertheless, a machine is a tool, and, like any other tool, is devised to increase the efficiency of the individual to whose direct and personal control it must always be subject. The question of quality, even in the case where highly developed machinery is used, is almost entirely a question of the personal element. As for the question of quantity, the real measure of accomplishment is not output per machine or per tool, but output per man.

Scientific management will not have completed its mission when it has determined in each industry the best method of handling materials and equipment in relation to workers, but when it has determined also the principles which underly correct methods of handling men. It is the purpose of this paper to show what is being done from this point of view at the Clothcraft Shops with the purpose of showing what a little effort in the right direction can accomplish. A further purpose of this paper is to bring to the attention of those interested in the future of scientific management the degree to which management is, in the final analysis, the handling of men and to emphasize that scientific management is scientific only in so far as it recognizes this fact.

From the point of view of the writer the responsibility of handling men from the time of their original selection is the most important responsibility of factory management. It is this responsibility which creates the function of employment in its broadest sense. It is only beginning to be recognized, however, that employment is a function of management. Even where considered an essential part of management, the employment function, with few exceptions, consists only of the original selection of applicants.

Scientific employment includes not only the selection of new employes, but also the keeping of every position in the organization permanently filled with the right kind of man or woman. The main part of scientific employment begins after the act of hiring is completed. Considered from this point of view, it is one of the most important functions of management, and one that requires constant scientific analysis and development. For this purpose it is essential that every industrial organization should have a department for the purpose of administering this function. Mr. Frederick Winslow Taylor, in mentioning the disciplinarian function in his works, undoubtedly had the employment function in mind and recognized its vast importance. While a very small organization may not be able to afford even one person whose sole function is the business of employment, this activity should nevertheless be recognized as a separate and most important function and in such cases administered by the manager or assistant manager himself.

This employment function can under no circumstances be administered properly by some head or underling of an operating department. Many of the questions with which the employment

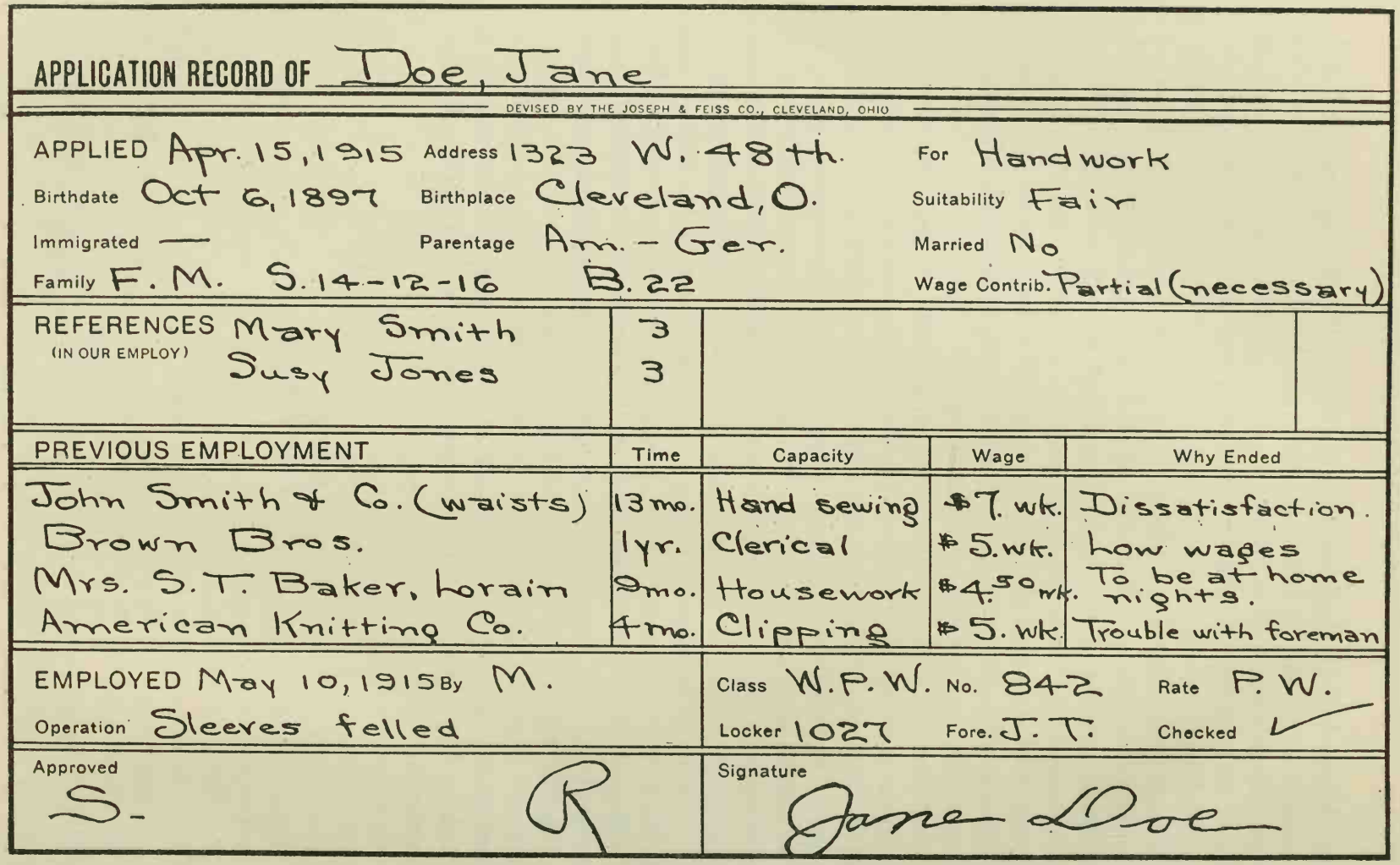
department has to deal are questions in which an operating head is an interested party; his very position, therefore, disqualifies him from administering this function. The qualifications required of such a person are essentially different from those required of one administering an employment department. Moreover, the qualifications which are generally considered essential to the head of an operating department are special knowledge or mechanical ability and sometimes a certain amount of executive ability. While some executive ability is a useful asset in administering the employment function, the chief qualities required are capcity to investigate and judge impartially, tact, a sincere interest in human affairs and a personality that inspires confidence.

All responsibilities of the management in the direction of personal service, directed toward the welfare and development of the individual, are part of the function of employment. For the purpose of administering this function, the Clothcraft Shops of The Joseph & Feiss Company have established an employment and service department. In this organization this department is considered one of the most important adjuncts to the management.

While, as mentioned above, hiring is only a small part of the function of employment, nevertheless, the solution of the problem of selection is of great importance in its bearing on the whole future development of the worker. All applicants for positions are interviewed by one of the heads of the employment and service department of the Clothcraft Shops. Certain specific information concerning the applicant is obtained in every case and entered on a blank for the purpose. (See figures 1 and 2.) Information deemed essential consists of:

Name and address.
Date of application.
Date and place of birth.
Date of immigration, if foreign born.
Parentage.
Languages spoken.
Education.
Whether married or single.
Number in family.
Wage contribution to family support.
Record of previous employment.

The idea should be to keep such records as simple as possible;—only the important details being entered.



APPLICATION RECORD OF Doe, Jane

DEVISED BY THE JOSEPH & FEISS CO., CLEVELAND, OHIO

APPLIED Apr. 15, 1915 Address 1323 W. 48th. For Handwork

Birthdate Oct 6, 1897 Birthplace Cleveland, O. Suitability Fair

Immigrated — Parentage Am. - Ger. Married No

Family F. M. S. 14-12-16 B. 22 Wage Contrib. Partial (necessary)

REFERENCES (IN OUR EMPLOY)

Mary Smith	3
Susy Jones	3

PREVIOUS EMPLOYMENT	Time	Capacity	Wage	Why Ended
John Smith & Co. (waists)	13 mo.	Hand sewing	$7. wk.	Dissatisfaction.
Brown Bros.	1 yr.	Clerical	$5. wk.	Low wages
Mrs. S. T. Baker, Lorain	9 mo.	Housework	$4.50 wk.	To be at home nights.
American Knitting Co.	4 mo.	Clipping	$5. wk.	Trouble with foreman

EMPLOYED May 10, 1915 By M. Class W.P.W. No. 842 Rate P.W.

Operation Sleeves felled Locker 1027 Fore. J. T. Checked ✓

Approved S. R

Signature Jane Doe

FIGURE 1—Application Blank (Front)

QUALIFICATIONS: A 2+ M 3 I 3 G 3

Languages Eng. Ger.

Education 7th grade (Public School) + 3 mo. Business College

NOTES: Anemic, listless in appearance. Will need careful follow up physically. Desirous of working here because she has heard there is good chance for advancement. Father out of work most of the time. Mother came along when application was taken and promised to cooperate with nurse, etc.

FIGURE 2—Application Blank (Back)

Languages spoken may be important in many organizations for various reasons. In this establishment English-speaking applicants are given preference. In case employment should be given to an applicant who does not understand English, the applicant must agree to attend one of the classes in English which are held at the factory.

The Board of Education of the city of Cleveland has coöperated by furnishing teachers and text-books for these classes. Where applicants do not speak the English language, it has often been found that their residence in the country, and, consequently, their employment is considered merely temporary by them. In the case of those who do not speak the English language, it has been found very difficult to impart instructions and to obtain proper standards of output and quality. Of thirty-five employes (out of a total of nearly 800) who have not sufficient knowledge of English to understand instructions thoroughly, only one has reached efficiency equal to that of the best doing the same kind of work. Eight of this number have reached efficiency equal to less than the average and the remaining twenty-six are the least efficient at their respective operations. Moreover, people who cannot speak the same language, cannot understand each other thoroughly and therefore can never attain that state of friendly feeling which is the basis of coöperation and spirit.

The matter of wage contribution is important. Other things being equal, preference should be given to those who have to support themselves or whose contribution to the family income is a necessity. The custom of contributing the entire earnings to the family income is often an important element in inefficiency, especially where the contribution is in whole or in part unnecessary. Younger women who live at home are often required to turn over the entire contents of their pay envelopes to the head of the family, even where such a contribution is not necessary. By depriving the worker of the use of his earnings, the incentive toward efficiency is removed and ambition destroyed. Cases of this kind are being constantly handled by the employment and service department. A home visit by one of the staff has always resulted in an agreement, being reached with the parents by which a stipulated sum was paid into the family exchequer and the remainder of the earnings kept by the employe in question and deposited in the Clothcraft Penny

Bank. Such an arrangement has always proven beneficial and has developed an increase of efficiency ranging from 20 per cent upward. A case in point is that of Tillie B. who had been the subject of a great deal of attention over a long period of time for the purpose of increasing her earnings, which averaged thirteen cents per hour. After an arrangement such as mentioned above had been made, Tillie's earnings immediately jumped and soon reached twenty-two cents an hour, which she held until she left the organization to be married.

Information as to past employment is important as a record of experience and earnings. The number of positions held is also an indication as to whether or not the applicant is a floater. For purposes of reference, this information is of little or no value and is never used at the Clothcraft Shops. Wherever possible, however, applicants give as their references members of the Clothcraft organization. This tends to keep alive in the organization an active interest in the kind of new employes. It is, moreover, a good indication of the applicant's character, since although a person cannot always be judged by his family, he can generally be judged by his friends.

The interviewing of applicants is important and requires considerable tact, judgment and experience. Ample space should be left on every application form for making notes as to the individual's special qualifications as well as any other circumstances surrounding the case. As judgment is essential, and as judgment is influenced by immediate impression, in this establishment no one is employed on the date of application. Postponement of selection tends to bring all applicants in their proper relationship in the mind of one who has the responsibility of their selection. This method moreover, tends to reduce the number of floaters who otherwise might get on the payroll.

Application records are classified as to sex, age and apparent suitability. When a position is to be filled, one or more applicants are sent for. A definite time is set for their appearance and self-addressed postal cards are enclosed to be mailed in case appointments cannot be kept. At this time selection is made for immediate employment and the fitness of the applicant is more definitely determined.

As a rule, in industrial establishments, where the question

arises at all, only fitness for the work is considered. There are, however, two kinds of fitness to be considered, provided a person is suited for industry at all; one is fitness for the position; the other is fitness for the organization. Of these the latter is by far the more important.

Fitness for the organization is chiefly a question of character. Every organization has a distinct character of its own, which is often recognized as being a tangible business asset. It is essential, therefore, that every member of the organization have a character sufficiently developed or capable of development to be in harmony with the character of the organization. This is the basis of *esprit de corps*. No matter how skilled or fitted one may be to do a given piece of work, if he is out of harmony with the spirit or character of the organization, he will be an everlasting detriment to himself and all others in the organization who come in contact with him.

The interview of the applicant by a trained head of the employment and service department is the basis of predetermining as far as possible both the fitness for a position and for the organization. In judging fitness for a position, past experience, where there is any, is sometimes a guide. At the best, however, it is a guide of only doubtful value. Personal choice can be taken in some instances also as a guide. This predilection furnishes in itself a valuable incentive. Often, however, it is a case of bringing the child up on candy because he likes it. When considered at all, it is important to weigh carefully all the reasons for the predilection.

The applicant's fitness for the organization, while more important, is more readily predetermined by interview. The interview at the time of employment is very thorough and designed to explain to the prospective employe the character of the organization and its policies, and the responsibilities of the organization to the employe as well as the responsibility of the employe to the organization.

As the aim of the employment and service department is to keep every position in the organization filled with fit men and women, the question of physical and mental fitness of the individual is of prime importance. For the physical needs at the Clothcraft Shops a complete medical department is maintained as part of the employment and service department. A graduate nurse is in direct charge of this work. The equipment includes a dispensary, sepa-

rate rest rooms, a waiting room and a consultation room for the factory physicians. The medical staff consists of a physician, an oculist and a dentist. The physician is at the factory three mornings a week, the oculist two mornings, and the dentist one morning. All medical work done at the factory is paid for by the company. Outside service of the factory physician is furnished to employes and their families at special rates, except in instances where the employment and service department recommends treatment at the company's expense. In order to facilitate physical examinations required, the time of taking on new employes is being regulated so as to coincide with the time that the physician spends at the factory. Physical examinations of all members of the organization are repeated annually or with greater frequency if there is cause.

The eye examination is of the greatest importance in considering applicants for certain positions. A preliminary examination is made by the nurse in order to discover any obvious defects of vision. Arrangements have been made by which, in case the oculist later prescribes glasses, they can be procured from a first-class optician at half the regular price. One of the greatest obstacles in connection with this work is the fact that many people who are in need of proper glasses have had glasses supplied to them by optical stores or by itinerant vendors without the advice of a practicing oculist. In most cases the trouble has only been aggravated. The benefits of an eye examination and the prescribing of proper glasses are readily apparent. In one case a young woman had worn the same glasses for a number of years. She had obtained them from a dealer whose business enterprise included the sale of glasses and jewelry. The young woman realized thoroughly that her eyesight was poor and complained constantly of eye strain and headaches. She was an employe of the firm for a number of years and had always been more or less inefficient. Examination of her eyes by the factory oculist proved not only that her eyesight was very poor, but that the glasses which she had been wearing for six years were fitted with nothing but plain window glass. Fitting her with proper glasses not only entirely eliminated the headaches, but, within a period of a few weeks, resulted in an increase in efficiency to a standard equal to the best.

The importance of proper care of the teeth is realized by few. Many chronic cases of headache, neuralgia or stomach trouble

have been directly traced to neglected conditions of the teeth or poor dental work already done. Only when one considers the number of ailments that can be traced to the neglect of the teeth, and the inefficiency and lost time that can be traced directly or indirectly to this cause, can one realize its importance. Of the hundreds of dental examinations made at the Clothcraft Shops, less than 15 per cent of the cases were found to have teeth that were properly cared for and in good condition. Consultation with a number of practicing dentists in the city of Cleveland has brought out the fact that this percentage is considerably better than the average. Besides the permanent record kept of the condition of the teeth, a chart is given to every one who is examined and an estimate made of the cost of work where needed. The dental work at the factory is limited to examination, advice and prophylaxis. At the time of examination thorough instruction is given in the proper care of the teeth. With this, as well as with the rest of the physical examination, the most important features are the instruction given at the time of the examination and the systematic follow-up.

All the work would be of little value if the preventive side were neglected. Not only are accurate records kept for this purpose (see Figure No. 3) but it is part of the responsibility of every member of the employment and service department to follow up the work in all of its phases at every opportunity.

No one is permitted to leave the shop for any cause whatever without consulting the employment and service department, unless dismissed from work in the regular way. This rule of procedure makes it necessary that permission for all absences be obtained from one source. This not only provides intelligent handling of such cases, thereby insuring justice and equality of treatment, but also brings promptly to the notice of the employment and service department practically every case requiring medical attention, no matter how insignificant.

Accidents are not of the major kind in the clothing industry, and even minor accidents have been practically eliminated at the Clothcraft Shops by a thorough system of safety devices and instruction. There are naturally, however, a number of cases where fingers are pricked in handling needles or where other minor injuries are incurred either away from or at work. Ordinarily these things are neglected and cause a great deal of inconvenience and much

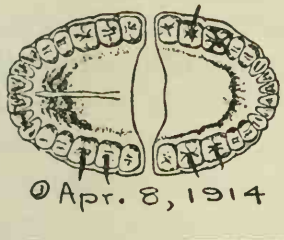
Date of Birth 3 Mch. 1884 *Employed* 4 Jan. 1903 *Name* Doe, Jane

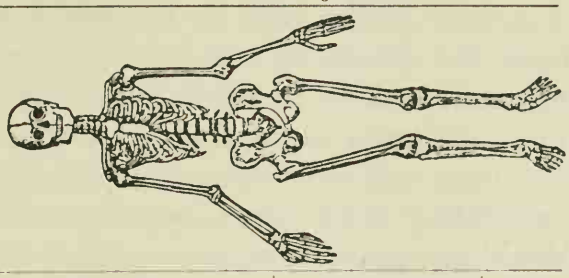
(4) *Family History:* Father died of cancer of stomach, 1899. Twin sister epileptic.

(4) *Home Conditions:* Lives with mother, twin sister, ten yr. old sister and seventeen yr. old brother. Shares badly ventilated room with two sisters. Home neat and thrifty. 5 rooms and bath. Garden.

Income Conditions: Mother owns home and Lucy and 17 yr. old brother (earning about $8.00 wk.) support family.

Savings: Yes.





	Date	*Complaint*	*Treatment*	*Remarks*	*By*
(1)	4–5–'14	Examination	No organic trouble. General health good, but must have more sleep and avoid tea and coffee. Should consult oculist because of headaches. Tonsils enlarged.		M.
(2)	4–11–'14	Headaches.	O B $^5/_9$ cgl $^5/_5$ Fundus normal O B $^5/_5$ Has glasses from optician (obtained $1^1/_2$ years ago) Homatropin neccssary.		S. M.
(1)	9–16–'14	Sore throat.	Cathartic. Gargle.		M.
(2)	4–18–'14		Homatropin administered. Shadow O P—Sgl 150. O B— " 125 = − cyl 025+180. Subj O D—Sgl 150. O B— " 125 − cyl 025+180 $^5/_5$.		S. M.
(2)	4–25–'14		Glasses satisfactory.		S. M.
(3)	7–30–'14		Dental work partly completed.		W.
(1)	8–1–'14	Sore throat.	Cathartic. Gargle.		M.
(4)	8–3–'14	Anemic.	Blaud's pills.	Will go to summer camp. Constant follow up about fresh air and sleep necessary.	K.
(3)	9–30–'14		Dental work finished.		W.
(1)	10–19–'14	Sore throat.	Cathartic. Gargle.	Absent 8 days. Consents to operation.	M.
(1)	11–2–'14	Enlarged tonsils.	Operation by M. at German Hospital.	Successful.	M.
(4)	11–23–'14	General follow up.	Health greatly improved.		K.

FIGURE 3—Medical Record. (1) Physician's records, entered in green ink; (2) Oculist's records, entered in violet ink; (3) Dentist's records, entered in red ink; (4) Nurse's records, entered in black ink.

loss of time due to infections. Instructions are given that no one should be permitted to work with the slightest scratch or the slightest ache or pain, or any indication whatever of illness, without consulting the nurse. This has not only cut down the time lost from infections to almost *nil*, but has also made it possible to forestall a great number of incipient cases of illness. This precautionary measure, together with the medical work in general, has undoubtedly been the means of keeping the working force of the Clothcraft Shops absolutely free from all epidemics that have swept through the community in the past few years.

Only one who has gone deeply into the question of health in its relation to efficiency can realize the loss occasioned by lack of knowledge and attention to even the simplest rules of hygiene. A great deal of work is constantly required to educate people to realize the necessity of fresh air, proper diet and regular hours, lack of attention to one or all of which is often the cause of inefficiency. What can be done by working along these lines is well illustrated by the following cases. At the time medical examinations were first installed at the Clothcraft Shops five young women were selected, all having been on the same operation from one to six years. These five had a record for absence, tardiness and general inefficiency much worse than any of the other forty or fifty on the same operation. It was found that all five were accustomed to sleeping with windows closed at night and took no outdoor exercise at any time. All neglected the simple rules of diet and two were accustomed to hurry away from home every morning without breakfast. One was found to be in need of eye glasses. All complained of not feeling fit when they came to work in the morning and complained constantly of headaches and a general debility, which naturally resulted in much absence from work. The cases were interviewed separately and proper advice was given and the ultimate results of irregularity and inefficiency were thoroughly gone into. By consistent follow-up the advice was soon accepted by all, with the result that tardiness and absence were practically eliminated in all cases and efficiency was increased from 20 to 50 per cent.

One phase of this work is worthy of special mention. No one who has ever been in actual touch with the men and women of an industrial organization has failed to run across the case of the man who is down and out because of long sickness in his family. Doctor

bills and bills for medicines are rapidly getting him deeper and deeper in debt or he may be brooding over what he thinks to be the last lingering illness of one of his family. A man with a load such as this can seldom hold up his end in either output or quality. In the vast number of cases, an investigation will show that his troubles can easily be alleviated. He is often the prey of an unscrupulous practitioner or some fraudulent fake who is bleeding the family for every cent that it can scrape together. Very often the family is despairing of medical assistance and is found to be squandering a large portion of its income on fake remedies at the instigation of the ignorant advice of neighbors or under the influence of the advertising carried in unscrupulous newspapers. The prevalence of these conditions is of such amazing extent as to cry for public attention. Unfortunately medical ethics seem too unethical to deal with the situation. By reason of its far-reaching effect, the handling and prevention of such cases must be considered one of the important accomplishments of the medical service of the Clothcraft Shops.

Along with the question of physical fitness must be considered the mental fitness of the individual. Not only does his capacity for certain kinds of work, but also his general fitness for the organization and his ability to advance depend to a great extent upon his mental fitness. Mental suitability, especially the inherent attitude of mind and spirit,—things that are prime essentials in fitness for the organization,–can be fairly well determined by a personal interview at the time of selection and by a reasonable amount of follow-up.

A great deal has been said and written about psychological tests for the purpose of selection, but the little that has been done of practical value has been limited almost entirely to a few tests for special aptitudes where special aptitudes are required. For the present, at least, such tests, even when practically developed, can be used only for the determination of individual limitations. At the Clothcraft Shops investigations and experiments have been carried on for this purpose. The tests that are being developed consist of general intelligence tests, including a test for ability to follow instructions and a series of tests for dexterity. Professor Walter Dill Scott of Northwestern University has been retained for the purpose of assisting in the development of these tests.

Recently a series of tests were given under his direction with the assistance of Professor Henry A. Ruger of Columbia University, Twenty-one subjects were chosen for the purpose and included members of the organization holding executive positions and operatives of different degrees of efficiency in various kinds of work. In practically every case the results of the tests checked up accurately with the estimate of general intelligence and dexterity based on records and personal acquaintance over a long period of time.

The object of these tests is twofold. In the first place, with the best of care errors are bound to occur in original selection and placement. People are often placed on work for which they are not at all suited, and some are occasionally selected who are mentally unfit for the industry. This under no circumstances means that all the mentally deficient are unfit. There are, of course, all kinds of mental deficients and there are a great many different kinds of work in most industrial establishments that can be done as efficiently by the subnormal, mentally, as by the normal. The human makeup is so complex that many instances have been found where a normal individual was incapable of reaching the same efficiency in certain kinds of work as a subnormal had reached.

Several cases were taken at the Clothcraft Shops of people who were apparently deficient mentally. A series of tests was made by the Binet method in order to confirm this conviction and in order to get an approximate rating of their mental capacity. In most instances, one who has not had intimate acquaintance with individual cases over a long period of time would not suspect any mental deficiency. A case in point is that of a girl who had been in the employ of the firm for about four years. Being employed rather young, she was put on an operation of the simplest kind. While on this operation she became very efficient. The result was that she was advanced and for another year was tried on various operations without being able to make good. By this time everybody had become more or less disgusted with Mary at home and at the factory and Mary quit to find other work. She returned in a few months, and as her spirit was good, it was decided to give her another trial at machine work. Mary utterly failed to progress in spite of her apparent best efforts and the special attention given her for the purpose. It was then decided to try her at an operation where she was required to follow certain lines of the garments,

trimming off surplus goods with hand shears, an operation that is simple from the point of view of the dexterity and intelligence required. Mary immediately began to make progress and her earnings are averaging with the best. This is a typical case showing the waste of time and effort which it is hoped will be minimized with the assistance of tests. It is the aim to use the tests as an aid in selection, to avoid placing people who are either normal or subnormal on kinds of work for which they are very likely to prove unfit.

The purpose of these tests in the second place is somewhat different, but is of very great importance in an organization such as that of the Clothcraft Shops. It is the practice of this organization to fill positions of clerical or executive nature, and in fact all better positions of any kind, by advancement. By this method a considerable percentage of the organization is moved up during a year's time. At the best a large number of mistakes have been made by advancing individuals to positions beyond their capacity. This, of course, involves eventually a reduction in position or loss of the individual to the organization. In any case the organization has suffered by a position poorly filled and the individual, as well as those responsible for his training, has gone through a period of discouragement which often leaves a permanent effect. It is hoped by means of these tests to minimize these errors.

It must be understood that these tests are for inherent intelligence and not for education or character. Education is valuable in industry only so far as it develops the use of intelligence and character. The limitations to the use of such tests must be well borne in mind, and the error of making generalities must be avoided. Tests of this nature cannot determine what a person *can* do, but are valuable only in assisting in determining what he *cannot* do. Both physical and psychological tests can be and have at times been made the instruments of much abuse. They must not be used to eliminate from industry that large proportion of the community which is not normal, physically or mentally, but must be used to assist in saving to the industry by more scientific placement and intelligent individual development every man or woman who is capable of productive effort.

Proper physical conditions are of vital importance in obtaining results from the men and women of an industrial establishment. There must be good light, good air and sufficient room in which to

work without discomfort. Not only must sanitary conditions be maintained at a high standard for reasons of health and comfort, but a high standard of orderliness and neatness in the surroundings is also essential for its moral effect on the worker as reflected in his work.

Properly maintained comforts and conveniences for the general need are important as equipment, not only to further the work of the employment and service department in general, but in developing the social spirit which is such a big factor in *esprit de corps*. A great deal should be done along these lines, but in order to meet with success, those things only should be immediately installed which are required to meet a permanent need, and those should be developed gradually which have for their object the general welfare of the entire organization.

At the Clothcraft Shops separate locker rooms are maintained for men and women in which each has his individual locker. Bath rooms are also maintained. There are separate dining rooms where every employe has his own seat. Those who wish can obtain simple but wholesome food at cost.

Separate recreation grounds are provided where various sports are indulged in at the noon hour and at other times. The recreation grounds form a big factor in the follow-up work of the individual. Noon-day recreations are beginning to be recognized for their beneficial effect on industrial work. Separate reading rooms and recreation rooms are also maintained. These are used extensively in inclement weather. There is dancing on regular days in the women's recreation room, music being furnished by the factory orchestra. The recreation rooms are also used for many other purposes. During the winter, parties are given by the different divisions of the shop. Entertainment is furnished entirely by members of the organization and their families. These parties are attended by all, including members of the firm, and are not only a source of enjoyment, but tend to develop democracy and good spirit. Other activities of recreational and social nature are the dancing classes and various leagues for baseball, quoits, captain ball, etc. These leagues are composed of groups within the organization itself. The Choral Club is especially worthy of mention. Its popularity can be measured by its size which during the past season was in excess of two hundred members. Records of twenty

women and ten men at the Clothcraft Shops, picked at random from those who make daily use of the recreation facilities, showed in every case, with but two exceptions, a record of efficiency far above the average.

One of the very useful means toward general education and development of the individual is the library. A branch of the Cleveland Public Library is maintained at the office of the employment and service department. Good reading is promoted and in many instances special reading courses are provided. The circulation is not only large, but constantly increasing. Definite information is furnished by the employment and service department concerning special classes in the public schools and other institutions. In fact, systematic efforts are made to aid the individual in all possible ways in furthering his general education and development.

Another feature of the employment and service department that has justified its existence is the bank, an important use of which has been mentioned above. Interest is paid on all deposits of a dollar or over remaining in the bank for a period of three months or more. Deposits are limited to one hundred dollars. When this amount is reached by a depositor, he is notified and advised to transfer his savings to a regular savings institution. At the present writing over 60 per cent of the members of the organization have deposits in the Penny Bank. Thrift is so well recognized as an essential to steadiness and ambition, that it needs no other justification. To a great number of employes it is important that a convenient means for saving, especially the smaller amounts, and the opportunity of obtaining a loan when necessary, are at hand. The habit of being in debt must be supplanted by the habit of looking ahead and saving, if a man is to reach or maintain any standard of efficiency. Everyone is familiar with the loan shark evil. This evil has been entirely eliminated at the Clothcraft Shops. In the first place every case that came to the attention of the management was fought in courts, so that now loan sharks refuse to lend money to employes. Employes can obtain loans for small amounts by applying to the employment and service department, provided a full statement is made as to financial affairs, and provided further that the money lent be applied directly by the department should it deem this advisable. Occasionally loans of large amounts are

granted by application to the management. Campaigns for savings are occasionally instituted and there is always a lively campaign for deposits during the few months preceding September for the purpose of stimulating people to save for vacation week. The entire plant closes down the first week in September for a vacation for all.

In touching upon institutional funds, it seems advisable that something be said about the question of industrial insurance. There seems to be no doubt as to the necessity of industrial insurance, but the question as to whether the state or the industry shall eventually maintain its various features has not as yet been decided in the United States. Most states are providing workmen's compensation for accidents incurred during employment. Some of these laws provide further for occupational diseases. No matter whether or not the state will eventually take over other features of industrial insurance, matters of this kind must always be developed first by private enterprise. The question of industrial insurance, therefore, in cases not already covered by state insurance, is a question of management.

For various motives, not all of them sound, the question of insurance has been left in most instances to the employes themselves. This has been generally done as a sop to the propaganda of committee or collective administration. A thorough investigation by the management of the Clothcraft Shops, conducted over a number of years, covering nearly every known scheme, has shown practically all of these plans to have resulted in failure or at the best to be uneconomic and unscientific. Such results are bound to follow wherever groups, uninformed and unfitted, try to perform tasks which require scientific investigation and expert administration. A group of employes can no more administer an insurance scheme efficiently than a foundry can produce silk.

Insurance is a business in itself, requiring trained experts with an enormous amount of special knowledge for the adequate administration of its various features. The management of an industrial organization can and should place itself in the position of an interested guarantor or sponsor for any insurance scheme and as such should contribute toward it and be responsible for its immediate application. It is not feasible, however, for either the management or the employes of an industrial organization to acquire along

with their other duties the special knowledge and expert training necessary for the economic and efficient administration of any insurance scheme. It is the plan of the Clothcraft Shops to put the insurance features, including accidents, sickness, old age and death in the hands of an insurance company that has a department organized for their supervision and administration.

It is impossible to touch upon all the features of the useful service performed in the practical, daily administration of the employment and service department. The chief thing is its personal contact and follow-up. In this connection one of the important features is the home visiting. An automobile is maintained to assist in this work. The homes of nearly all new employes are visited at the earliest possible opportunity and practically all absentees are visited by the factory nurse. In case of illness, assistance and advice rendered have often returned the absentee to his work in a far shorter period than if left to his own devices. Following up delinquency and other matters frequently calls for home contact. Unfortunately it is often found that home influence runs contrary to the factory influence. The home visits as a whole have been found of inestimable value in obtaining individual results and coöperation.

While the work of the employment and service department, as shown above, is directly aiming at the development of the individual so that he can fill his position steadily and perform his duties efficiently, it is essential that intelligent coöperation in all departments of the business and all its policies be recognized as an important responsibility of the management. For one thing competent instruction must be provided. This is effected at the Clothcraft Shops by a corps of instructors who are personally responsible for the instruction of all new hands and old hands on new operations until they have shown suitable progress and developed to a satisfactory state of efficiency.

Steadiness of employment must be considered not only from the point of view that it is desirable for reasons of profit, but also from the point of view that it is a responsibility of the management to furnish a steady and efficient employ with steady opportunity. From this point of view alone it becomes the duty of the management to standardize the work and working conditions. The standardization of the purchasing and handling of materials to maintain

an even flow and an even balance of work is not alone essential, but the balance of employes is also of greatest importance. In most industrial organizations it will be found that there are constantly employed for a given purpose considerably more people than are necessary to turn out the work. In such instances it will also be found that the number of people employed varies to such a degree that there is not only no opportunity given for steady employment, but the distribution of opportunity varies from time to time. Means such as are used under scientific management for determining the standard methods and standard times for performing a task should be used to determine the exact number of people to be maintained in every position.

Whenever possible the workers should be trained to perform more than one kind of work. In this way they can be used to help out in cases of emergency, some of which occur daily in every large establishment because of absences or other reasons. In the Clothcraft Shops all those willing to learn other work are given opportunity to do so and are paid a retainer while learning. All employes who are capable of helping out on an operation are carefully listed and a definite hourly retainer is paid them whenever they do work on which they are not able to earn as much as on their regular operation. At all times the normal working force should be maintained except only under such conditions as are forced upon the industry and beyond its control. Where there is a temporary lack of orders due to industrial depression, seasonal fluctuations and the like, the number of employes should not be cut down, but the number of hours of employment should be reduced equally throughout the whole organization. At the Clothcraft Shops this policy was strictly adhered to during the recent industrial depression, which reduced its normal working hours by approximately 15 per cent for a period of six months. While the percentage of quitters for this period was noticeably increased, nevertheless, this increase was diminutive as compared to the number it would have been necessary to lay off had another policy been followed. We believe, moreover, the duty of providing steady employment under all possible conditions is a moral responsibility to the community at large.

The seasonal character of some industries is a well recognized part of this problem. There is no doubt that in order to overcome

this obstacle a great deal of public education is necessary. The fact remains, however, that the problem can for the greater part be solved by the industry itself. For this purpose purchases must be standardized and the purchasing policy itself so developed that a good proportion of orders can be anticipated.

In this connection one of the most important things is the sales policy. Many businesses, even though having a highly developed manufacturing organization, have not a sales policy or sales organization, worthy of the name. It is only in exceptional instances that the sales policy and the manufacturing policy are properly co-related. Ordinarily the sales department is administered with entire disregard of its most important function, *viz.*, to market a product that will permanently be of most profit to the entire organization. The Joseph & Feiss Company, in order to meet the problem of furnishing steady employment, have for some time past conducted an advertising campaign concentrating on certain staple numbers. The volume of sales that has resulted has been sufficient under normal conditions to provide steady employment when other establishments in the same industry have been shut down. As to this phase of the problem, however, the surface has, as yet, only been scratched. The men who hold the purse strings must sooner or later learn that the correct point of view, both morally and for the purpose of permanent return not only to themselves, but to all the organization, involves the realization that the factory does not exist for the purpose of turning out for a temporary profit whatever it is easiest to sell, but that the sales force is part of the manufacturing organization to market whatever it can most steadily and, therefore, most profitably produce.

Only a thorough realization of all the actual problems and earnest efforts towards their solution will bring results. While the greater part of these results shows in the spirit of the organization and in the spirit of its personal relationships and can only be judged by actual investigation, an important result is a decided steadying of the working force, which can be judged by accurate data. This is readily discernible in the accompanying records and charts in use at the Clothcraft Shops.

From the record of absentees and tardies (figure 4) it will be seen that during the first six months of 1915 the average number of tardies was only two and one-half persons per day. This is equal

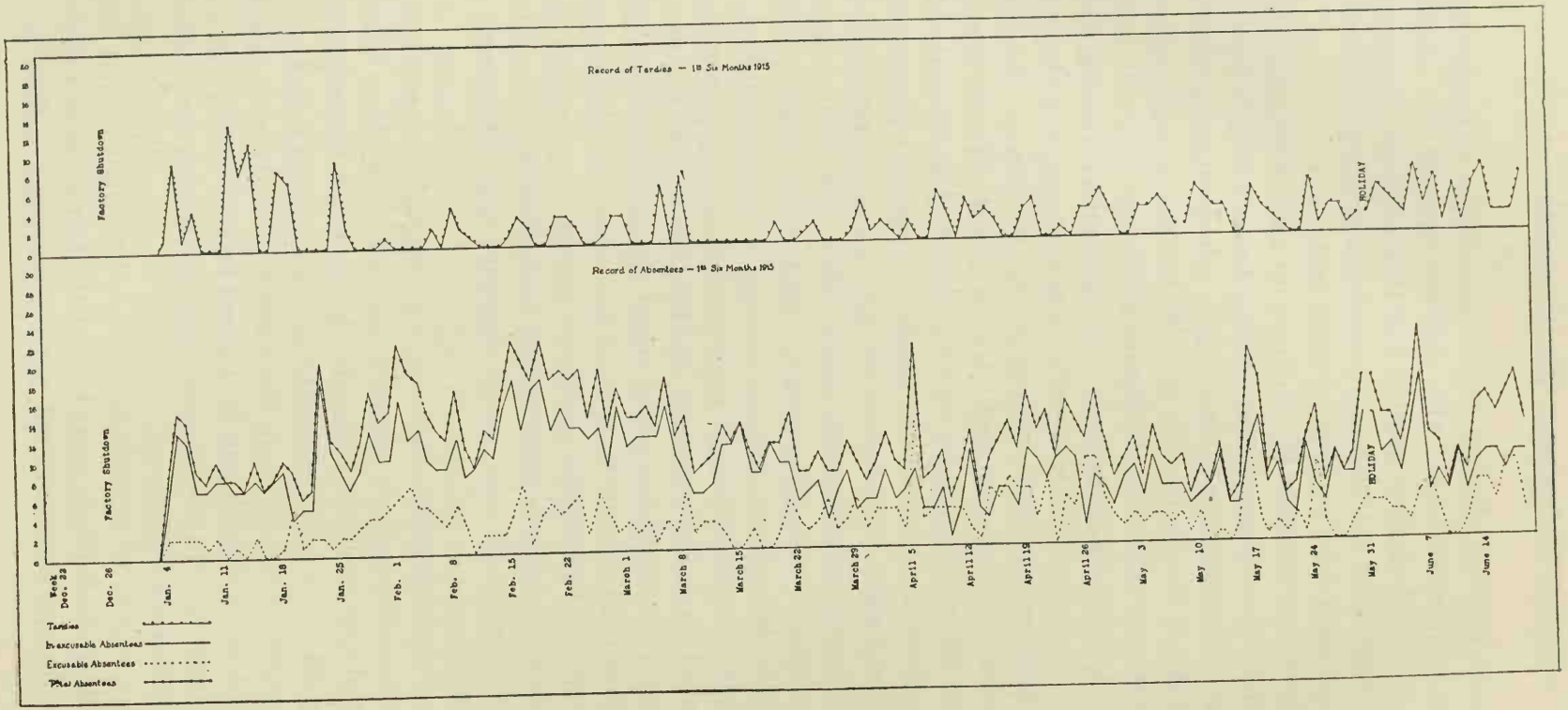


FIGURE 4

Record of Absentees and Tardies

to one-third of 1 per cent of the working force. For purposes of accurate follow-up absences are classified as excusable and inexcusable. Figure 4 shows that the excusable absences averaged a little over seven persons per day or .9 of 1 per cent of the working force. The inexcusable absences averaged only a little less than four per day or .5 of 1 per cent. The total absentees per day averaged eleven or only 1.4 per cent.

In regard to quitters a little more explanation is necessary. Very few people realize the tremendous cost to industry from this cause. Various estimates of this cost have been made. These estimates vary from fifty to two hundred dollars per person, depending on the nature of the work and character of employe obtainable and the percentage of old employes who are rehired. Taking even the lowest possible estimate, it would seem that any reasonable outlay of both money and effort for the purpose of reducing this industrial and social waste would be justifiable. At the Clothcraft Shops in recognition of the tremendous loss from this source and the consequent value of notice in case of a contemplated severance from the organization, such notice is paid for at the rate of an amount equal to a day's pay for every week's notice, but not in any case to exceed an amount greater than four days' pay.

For the purpose of compiling comparable data as regards "labor turnover," standard practices should be established. The average standing payroll for any given period should be the basis as this gives the average number of positions to be filled. In case there is a general reduction in the number of positions during the period, the percentage of new employes to the average standing payroll should be taken. In case there is an increase in the organization, the percentage of quitters to the average standing payroll should be taken. In the first case that amount by which the number of quitters exceeds the number of new employes will account for the reduction. In the second place, the amount by which the new employes exceed the number of quitters will account for the increase.

For purposes of intelligent comparison, quitters should be classified as "unavoidable" and "avoidable." "Unavoidable" should include discharges, death, sickness, accident, marriage, retirement, etc. "Avoidable" should include cases of dissatisfaction and all cases that cannot unquestionably be classified as

unavoidable. In every organization there are bound to be some unavoidable quitters. The records of the avoidable quitters, therefore, is the important thing. The record of new employes and quitters for 1914, as shown in Figure 5, demonstrates, among other things, that the avoidable quitters had been reduced to a figure less than one half as large as that of the unavoidable quitters and were only 6.4 per cent of the working force.

Nothing shows more clearly the progress which has been made in this respect at the Clothcraft Shops than the record of "labor turnover" for the five years from 1910 to 1914 inclusive as shown in Table 1.

TABLE 1.—LABOR TURNOVER 1910–1914

Year	*Stand. Payroll*	*New Hands*	*Per cent*
1910	1044	1570	150.3
1911	951	807	84.8
1912	887	663	74.7
1913	874	569	65.1
1914	865	291	33.5

These records tell their own story. It may be also worthy of note that over one third of the members of the Clothcraft organization have been in the continuous employ of the company for a period of five years or more. It is practically impossible to obtain accurate figures as to normal labor turnover. In the few instances where figures are available, progress has already been made. In the case of one large concern in the men's clothing industry, the number of people employed for 1914 amounted to 115 per cent of the payroll, which is undoubtedly better than the average in the industry. The following relating to a somewhat similar industry is from the report of the Federal Industrial Relations Commission (page 166):

> An investigation of the cloak and suit industry in New York showed the maximum number of employes in sixteen occupations during any week of the year to be 1,952. Actually, however, the payrolls showed that 4,000 people were employed in these occupations.

It can readily be seen how intricate are the problems involved in the art of handling men. Every step toward the solution of these problems is a step in the direction of democracy. Efficiency as a whole is accomplished by efficiency of the individual and efficiency of the individual is accomplished only by methods involving personal contact.

In a recent noteworthy article on *The Progress of the Social Conscience*[2] by William Jewett Tucker, President Emeritus of Dartmouth College, the following statement is made: "Public opinion as the governing force in modern democracy is the objective of social conscience." It is the awakening of the social conscience

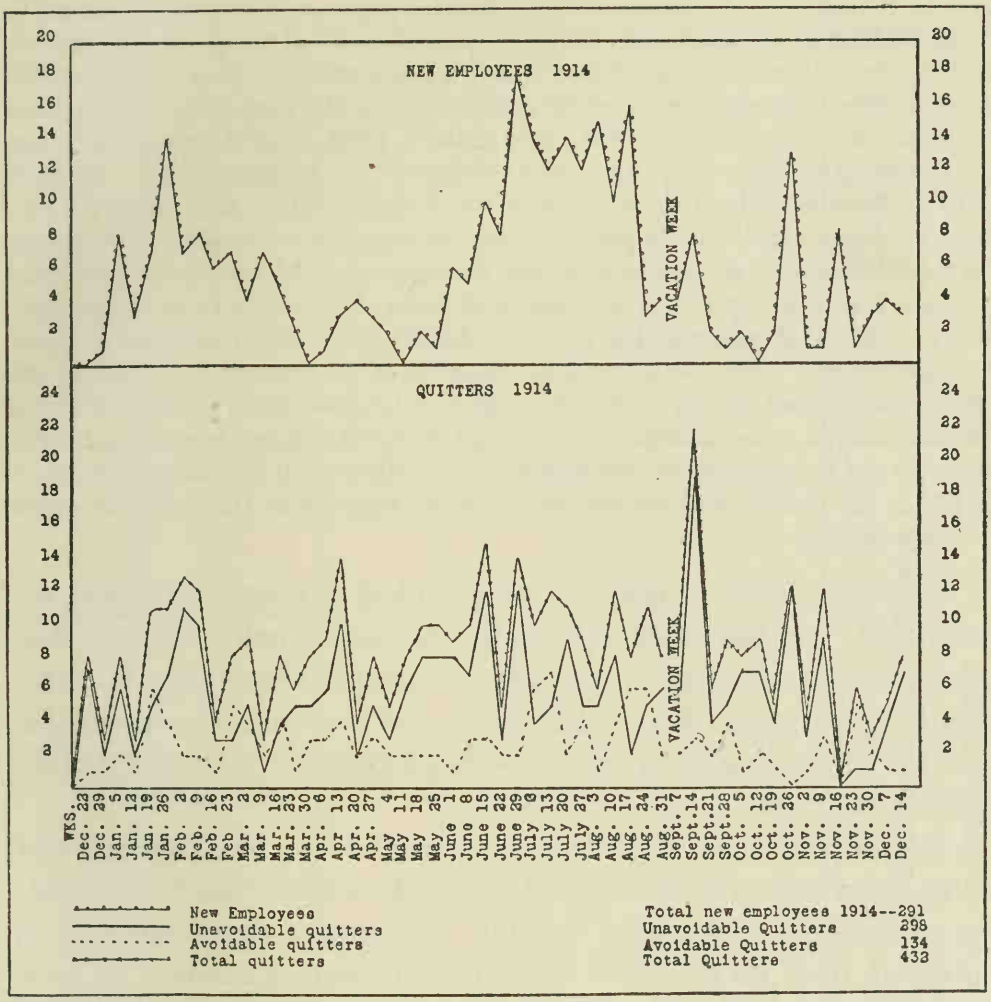


FIGURE 5—Record of New Employes and Quitters

that is making the man at the head of an organization realize the necessity of free expression of public opinion. The development of this expression through the natural channels of intimate contact will lead in the most normal and direct way to the democratization of industry.

[2] Appearing in the 1915 September issue of the *Atlantic Monthly*.

The existence of democracy in an organization is not dependent upon any particular method or any particular form of expression.

Professor Thomas N. Carver of Harvard University in his book entitled *Essays in Social Justice*[3] says:

> This leads us to a consideration of a statement which is so frequently set forth in the ephemeral literature of the day, by popular writers and speakers to the effect that as the nineteenth century achieved political democracy it remains for the twentieth century to achieve industrial democracy. They who have this point of view have apparently never gotten beyond the idea that balloting and democracy are synonymous. We have heard a great deal of preaching in our day regarding idolatry of wealth, of the worship of the almighty dollar. We have heard apparently little of the worship of the almighty ballot, and yet of the two forms of idolatry the latter is not only more vicious, but more silly. Two things and two things only are essential to real democracy. The first is an open road to talent, that is to say that every man shall have an opportunity to rise to positions of power and responsibility in proportion to his ability, regardless of birth, privilege, caste or other social barriers. The son of the peasant may become the ruler in government or the employer in business by sheer force of his own merit, if he happens to possess merit. The second essential of pure democracy is that they who are in positions of power and responsibility shall be made sensitive to the needs, the desires, and the interests of those over whom they exercise power and responsibility.

The open road to talent is an essential to every successful organization. At the Clothcraft Shops the road is not only open, but every possible aid is given for advancement. Practically all positions in the organization, including clerical and executive positions, are filled by those who by reason of sheer personal merit have come up from the ranks.

One of the most important functions of the employment and service department is to develop organization spirit and free expression of personal and public opinion. It forms a direct channel of expression from its source to the ear of the management. In fact, the chief purpose of a scientifically organized department is nothing more than the development of that intimate personal contact so necessary to management. At the Clothcraft Shops about one fifth of the total number of employes come daily in contact with the employment and service department. All cases where direct contact with the management would be beneficial are immediately referred to it. This requires constant daily contact of the management with the department, and brings it into intimate relationship

[3] Harvard University Press, Cambridge, Mass., 1915.

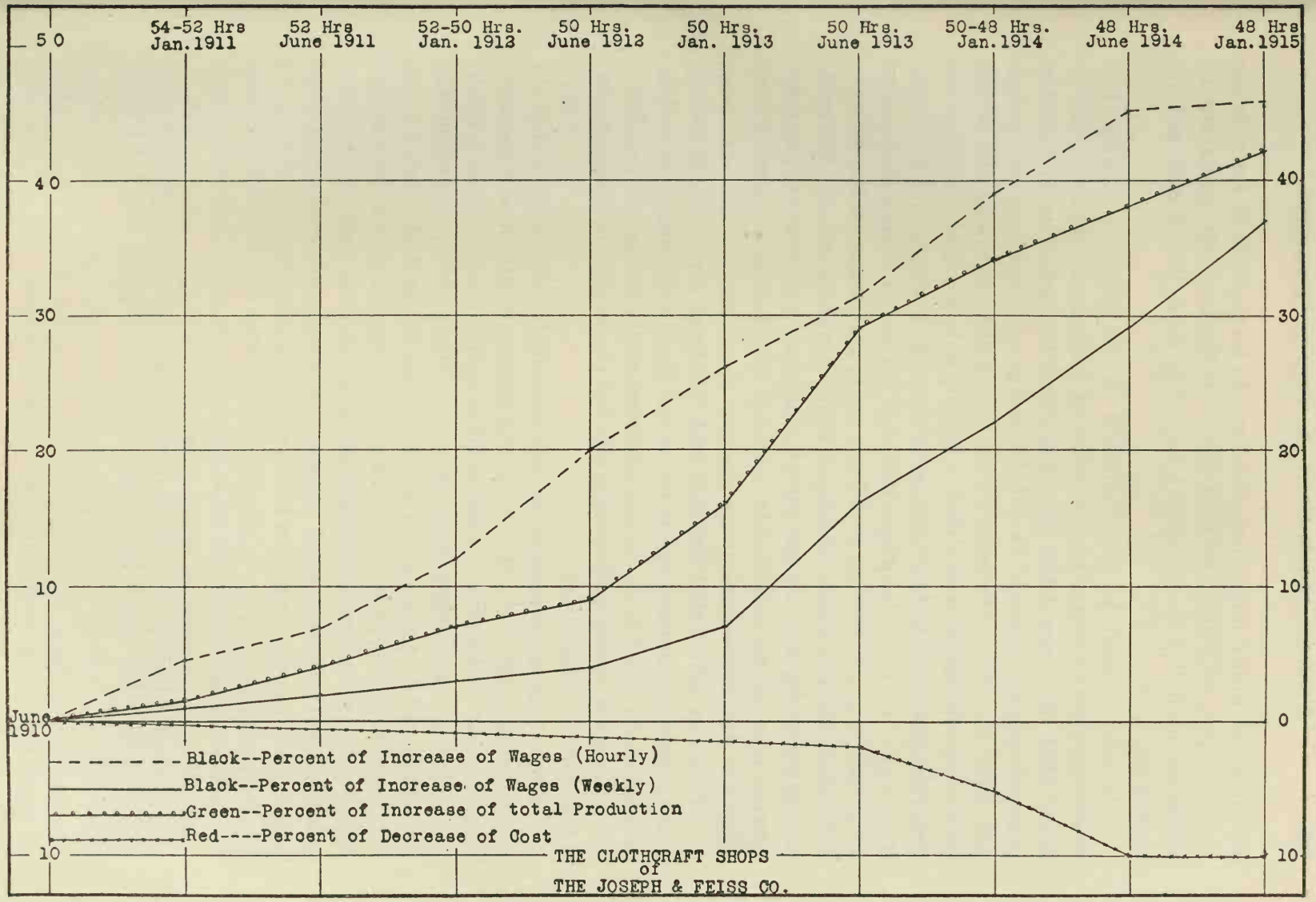


FIGURE 6—Record of Progress

with a great many more cases than would be possible in the average organization of much smaller size. Wherever the management assumes the policy of the closed door, this department may well be shut down.

Results cannot be accomplished in the spirit of charity, but must emanate entirely from a sense of justice. It must be understood that work along the lines described above can never take the place of wages. Such work must have as a reason for its existence not only increased efficiency, but the increased reward to which increased efficiency is entitled. Figure 6 is a chart showing the progress of the Clothcraft Shops in respect to wages and efficiency from June, 1910, to January, 1915. This shows during this period an increase in production of 42 per cent; an inrease in the average individual hourly wages of 45 per cent, weekly wages 37 per cent; and a decrease in total manufacturing cost of about 10 per cent. During this period the weekly working schedule was reduced from fifty-four to forty-eight hours.

It is our belief that results, such as these, are obtainable only when scientific management is scientifically applied. Scientific management will live if for no other reason than that it has faced the problem squarely and recognizes that the science of management is the science of handling men.

That scientific management is a solution of the industrial problem involving all the ethics of human relationship was recognized by no one so well as by the father of scientific management himself. For proof we need only remember the four principles of scientific management[4] as propounded by Mr. Taylor, and his well known words that the "Product of a factory is not materials, but men." The most hopeful sign of the times is the awakening public conscience in regard to the elements of success. The measure of success is no longer how much you make, but how you make it.

[4] 1. The development of a true science.
2. The scientific selection of the workman.
3. His scientific education and development.
4. Intimate friendly coöperation between the management and the men.
The Principles of Scientific Management by Frederick Winslow Taylor, Harper & Bros., New York.

DEMOCRACY AND INDUSTRY

By Ernest Martin Hopkins,
Boston, Mass.

The conditions attaching to American industry have undergone kaleidoscopic change as a result of the great war. A little more than a year ago there was a dearth of work throughout the country; today, almost everywhere, the scarcity is of workmen. New plants are building and new equipment is being feverishly sought. Unprecedented opportunities and unprecedented obligations alike are being thrust upon industrial managements.

More than upon any other single nation the burden rests upon us to offset through our productive methods the loss of production incident to the demoralization of industry in the great industrial nations now in conflict. We have been discussing through recent years whether our economic surplus of modern times was properly divided: for a time now the question will revert to whether any surplus can be maintained, or whether for lack of industrial preparedness we must lapse into medieval conditions of economic deficit, even though we escape the whirlpool of international bankruptcy.

Meanwhile, American industry is justifying to a considerable extent the better things that have sometimes been ascribed to it, in its resourcefulness and adaptability. Contracts that would have been considered formerly in terms of months are being figured in terms of weeks, and plants that had been planned for deliberate building in the future are now being rushed to completion in unprecedented haste. All this, nevertheless, is being done with intelligent thought, however rapidly. As a single illustration, we hear a lament from some theorists in regard to so-called waste construction and the query is made as to what can be done with all these surplus buildings when the demand for production falls off or changes; but investigation would show in the majority of cases that though these are built because of the present emergency business, yet they are built on lines that make them potentially replacement plants for normal business, to which use they are designed to be put when the present pressure shall have been removed. So, in a variety of ways, careful thinking is being done to

figure how immediate necessity may be met in such way as to suffice likewise for future needs. Indeed, it not infrequently seems that the greater the stress the more careful and effective the thinking is, despite the brevity of time in which it must be done.

What, meanwhile, is to become of the consideration of the human relations in industry? This was in fair way but a little time ago to have got the intelligent attention it needed and was entitled to. We were metaphorically sitting down to this subject and planning to discuss it leisurely and good temperedly, with the distinct purpose of doing something about it all eventually, beyond even the good work already being undertaken.

There is this much certain that there should be the greatest possible accuracy in the use of the language we speak when we undertake to translate our mental processes at work upon these problems, inasmuch as the tendency is, in such a time of strain, for the mutual discussion of relations between capital and labor to fall into curt exchanges of ultimata and pronunciamentos, with quick settlements of differences whether well advised or poorly. The experience is not uncommon even in social life of hearing excited debate concerning some subject on which the disputants prove to be in complete agreement after they have talked around it through a period of completely misunderstanding each other's point of view. It is an especially grave misfortune in industry if one party to a contention clothes its thoughts in words that misinterpret these thoughts to the other. But this is a danger to which industrial disputes are peculiarly susceptible, and much would be gained if we could get the language in which these should be argued reduced to certain elementary forms which should have a common meaning to all.

The congenital reformer presumably is a valuable type, but he is not without sin against the cause he has espoused in his discussion of industrial relations. Perhaps it is because so many of these have been writers that we have now in common parlance certain dignified phrases of meritorious sound which convey as many different shades of meaning as there are people voicing them. It is at any rate a fact that too many of the reforming guild are literary stylists first of all, and most zealously. Euphony and mellifluous diction go extraordinarily far with us as a people, and phraseology too often wins a widespread approval that would

not be given to the logic which it implies if it had not been verbally sweetened. It consequently becomes essential for us, not too infrequently, to analyze the catch-words of our political, religious, or social language to determine whether we are using words primarily to bespeak thought or because they have a certain rhythm in their jingle. Only so we can avoid as a folk the attribute ascribed by a popular novelist of the last century to one of his characters who was said to have "a mind not exactly intellectual but felicitous in vocabulation."

There is, in particular, one such phrase, much in current use now, "industrial democracy," that was far too good to have been spoiled but that has been so glibly used to cover indefiniteness of thinking that is has become nearly if not quite useless for practical work, particularly for those who actually and passionately believe in democracy. This phrase is generally accepted as descriptive of some condition not yet operative but greatly to be desired. Its inherent attractiveness made it particularly adapted for a non-consequential word formula for the period of destructive agitation which tore down necessarily as a prerequisite to clearing the ground for upbuilding. As the unknown quantity in the equation, solution of which was to give us better conditions all around, it was pretty completely monopolized as a substitute for the more conventional symbol, *X*, to represent the factor sought. The inflammation in the body politic developed by the long-time acceptance as an axiom of the theory that "whatever is, is right" needed, very possibly, the treatment for a time of such a counter-irritant as the doctrine that "whatever is, is wrong"; and during such a period anything which might be assumed to mean a change seemed bound almost certainly to signify a betterment. It was by some such process that no close scrutiny was given to the syllogism which came to have rather general acceptance,—

> We need that which we haven't;
> We haven't industrial democracy;
> Therefore, we need industrial democracy.

I have heard industrial democracy talked about within a few months among others by a trade unionist, a syndicalist, a student of social tendencies, and an employer. The meanings which each of these respectively attached to the phrase were so unlike that there was not even a common denominator discoverable, and yet as

a sporting proposition I would ask no more definiteness of action than would have resulted from bringing the group together. The trade unionist argued for the control of a specific industry through government by the different trades involved, seemingly with an analogy in his mind between the functions and rights of the different trade unions and of the states of our political system. The syndicalist had a clean-cut and well expressed argument that industry belonged solely to the workers in it under any circumstances and that they ought to combine and take it and run it. The student had a conception of an agreement between ownership and workers that should be reciprocally coöperative and so advantageous to each as to be compelling, once it should be tried. The employer wanted an organization of his own workers permeated with a common zeal for his interests, not too insistent about their own affairs but properly appreciative of blessings received, when he should confer them. The distributing fact in all this was that each was so obviously sincere in his belief that he understood the spirit of this elusive thing—industrial democracy—and in a testimony meeting where all who believed in it should have been invited to rise, the four would have been found upon their feet. It would be highly amusing if one were only cynical, but to those who crave real progress toward reasonable industrial adjustments such futility cannot but be a genuine sorrow!

We who believe in democracy as a political system do so in full recognition of the fact that its merits are not secured without very considerable sacrifices. One's faith would be but insecurely established if it were founded on any basis which did not take into account the real cost at which democracy must be maintained seemingly. As a political system it is clumsy and inefficient in all material ways, and idealistically it sacrifices the opportunity for carrying the few to major refinement for the sake of bettering the average. Its virtues lie in the free-play it gives to individual volition which it puts under restraint only at the point where it must be curbed that other individual volitions may have their like free-play. Thus, to those of us who wish to live our own lives, with the minimum of outside interference, democracy becomes a very precious thing.

Even so, however, we recognize in emergencies when unity of action becomes a necessity for early accomplishment, that the

forms of pure democracy must be somewhat laid aside to preserve the fact. We see this principle at work in varying degrees as some dread disease grips a community and quarantine shuts off exodus from it; or as fire devastates a city and the police are put in control of the panic-stricken populace; or as floods force death and destruction upon the country-side until the troops are brought in to protect and aid in reconstruction. For a time in any of these cases, we allow the delegation of authority to go to autocratic extreme, complaisant in our knowledge that its purpose is being accomplished in behalf of the over-ruling principle of democratic government.

Now industry has as its primary and specific function, upon the accomplishment of which the prosperity of the people at large depends, the constant maintenance of economic surplus through its productive methods. Furthermore, the success of government in the political state ultimately is dependent upon this same thing, for no form of government is likely to endure under which the trend toward reduction of economic wealth becomes established. Of course, the answer may be made to this that by new methods of distribution by which great accumulations of wealth should be broken up, the people at large could have increased resources even under conditions of lessened gross economic wealth. But this condition could only be temporary if the production methods of industry became disorganized and their fruits became impaired, for with the shrinkage of the economic surplus conditions would steadily tend again to become drastic for the increasing number without capital, and any considerable correction of such conditions would be correspondingly difficult for demobilized capital to accomplish.

It is, to be sure, perfectly possible to imagine a consumer's orgy for any given generation during which the wealth for current use should be more largely appropriated to common utilization and under which an undue proportion of the world's principal should be consumed, regardless of all consequences for ages to come. In spite, however, of seeming sordidness of occasional eras or of occasional social groups, and in spite of certain conspicuous exceptions both among capitalists and labor bodies, the world at large with all its short-sightedness has too much altruism and too much idealism to let such a condition continue long. In the main, a

large majority would agree to the proposition that we must hold to our rate of production, or even increase it to normal extent. The important differences of opinion would arise over the proportional assignments of the wealth created to the various parties involved in the accomplishment.

Here it is that democracy as a form of government has its obligation for intelligent jurisdiction, for it can say and must be expected to say, from its broad concern for the common good, that industry shall not be so conducted that the individuals involved shall be subjected to conditions that in their physical, mental, or moral influences are antagonistic to the principles for which a democratic government stands. Or, putting the proposition positively, democracy as a governmental system can say that all which industry does must be done subject to the public code to which the government commits itself in behalf of its people.

There can be little exception taken to the argument of Mr. Gompers in his recent editorial on "Labor's Participation in Government" in the *American Federationist* for February, wherein he writes:

> . . . . These, and all workers, have earned the right to real representation in government and in determining its policies of industry and society—have earned their right through their flesh and blood and through the bone-wearing anguish of toil. Yet they have been denied full, real recognition of their worth as men and citizens—they have not been admitted to participation in the heart of government. Daily life has taught them to distinguish between the real and the spurious—between true power and things associated with power.
>
> The right to vote implies but little as to real participation of the voter in the government. With the development in our country and the increases in our population, the political tendency has been toward the creation of commissions authorized to investigate, to determine policies and to formulate plans. Since the real work is done through commissions and committees, these are the political agencies that exercise governmental power. Only when there is representation on these committees and commissions, in addition to the other recognized political rights, is there real participation in the political life of the nation. This commission tendency of government has been so gradual that its significance and importance have not been grasped by all of the citizens. Those who have interpreted this tendency aright have been urging upon the attention, not only of those in authority, but of the wage-earners themselves, the justice and the necessity for representation of wage-earners on these commissions and committees.

Certainly the conduct of no industry must be allowed to deny rights which the government purports to guarantee or to controvert

principles for which the government stands. Coincidently any industry which does not see, must be made to see that in the evolution of a system of which it is the beneficiary, by which people have been drawn from their homes to centralization within factories or plants, and by which workers have sacrificed the mental and physical advantages of a variety of occupations to highly specialized tasks, it has become responsible for the establishment of conditions under which the well-being of the worker shall be served throughout his hours of employment, and for the setting of hours and wages at points where he shall have a chance, outside of working hours, to conserve the welfare of himself and those dependent on him. Beyond such limits, however, wherever they be fixed, the procedure must be existent which most consistently breeds efficiency and stimulates output in production unless we are to pay the penalty individually and collectively.

"Industrial democracy" in its too frequent use is intended to be descriptive of proposed organizational modifications which imply an electorate of workers which should directly have jurisdiction over management. The fallacy involved is that this is desirable, on the assumption that this would or even could be of lasting advantage to the individual worker, for it certainly would not be except as one may assume that such democracy would be free from the weaknesses and faults of democracy as a system of government in the political state.

Politically we have specialized as a people in recent years so completely on claiming rights that our senses of obligations and responsibilities have become atrophied. Authority has been weakened, not only in state and church, but in home and school, until it commands even less respect than obedience. Amid all this, somehow, the conviction is growing that action which develops from dilettante philosophizing about the claims of society and the common good offers too little compensation in constructive accomplishment for what society is called upon to sacrifice in character of the individuals who compose it, through their being so little called upon to acknowledge authority to anybody or anything.

It is unfortunate that there is not a more general knowledge of the influences under which industry has developed. If the elementary fact could be understood of the relation of decreasing productivity of land to increasing wants per unit of population,

to say nothing of the actual increase of those units, it would bring incalculable good, in that it would do away with the haziness in which so many of our industrial problems are befogged. The bearing of the truth ought to be understood that the human mind alone has stood between the increasing population of the world and universal want. He who first made two ears of corn to grow where one grew before was earlier representative of that ever-increasing number who by applying their intellects to production problems have made possible the increases by which growing populations could be maintained within given areas of the earth's surface. The modern counterparts are the men whose brains have devised machines, applied power, and invented methods by which the productive output per unit of population has increased beyond comprehension.

In this connection it deserves attention that of the great industrial nations, that one where abject poverty has been most evident and widespread is England, where trade-unionism and those of like thought have most definitely agitated for and secured restriction of output in production. Lord Rhondda, the Welsh coal magnate, in discussing after-the-war problems recently, as quoted in the *Associated Press*, made a number of most interesting comments on conditions in England. He said, in part:

> Apart from the slump inevitable during the period of adjustment immediately following the close of the war, we shall be as heavily saddled as any country in the world with war indebtedness. Heavy taxation will tend to drive both mobile capital and the best of labor out of the country.
>
> We have got to get both of them back. We have got to produce more than we now produce. And to do this we have got to organize the nation in a big effort of industrial production. Nothing else can again secure us the premier place in the markets of the world.
>
> Now we know, from our munition-making experience, that our industrial population can produce more per man than it did before the war. Much as I sympathize with trade union aims, I am afraid it has to be admitted that trade unionism, by its restrictive policy, was slowly throttling the commerce of Great Britain. From a variety of causes we now obtain, I understand, a higher output per man, and we are certainly paying a far higher rate of wages per man.
>
> The question is, will labor agree to continue the increased output after the war, and still further increase it? Restriction of production has become such a fixed policy with many of our great unions that there is grave doubt whether they will sanction such a course, even though employers will be willing to maintain the higher rate of wages. Personally I hold that it is nationally advisable to pay a man the highest possible wage, provided you get from him in return his maximum production.

Unfortunately the unions have hitherto declined to admit that the restriction of output affects the whole business possibilities of a nation. I think, however, that the graver conditions we shall have to face at least suggest that they should reconsider the whole question with a view to national exigencies. One is tempted to wish, by the way, that trade union leaders were more keen on education. If they would encourage among the workers the study of sound economics from a national point of view, they would do much to clear their vision as to the vital part which production plays in the history of our country.

If we in England are to take our proper place in the fight it will require vigorous effort to obtain a production large enough to compete at all outside our own boundaries.

In the large, the history of invention is the history of progress, and must continue to be so. There is abundant reason to believe that from now on the same type of intelligent dynamic thinking which has heretofore been applied to mechanical developments and processes will be applied to that accumulated mass of problems which we classify under the term of "human relations." Visualization of the outcome of this is beyond possibility. Individuality and opportunity for pride in their work have been too largely denied the workers under modern methods of production. The way must be found to restore these as a prerequisite of all else that stands awaiting adjustment in the field of industrial relations. Only when this has been accomplished can we begin to expect the cumulative growth of contentment and satisfaction among people at large that will so greatly add to the sum of human happiness.

The result will be gained, however, through the influence of common sense rather than of sentimentality. This remains true even though there is, to be sure, plenty of reason to distrust the kind of thinking being done by the spokesman of the various interests involved. The kind of reasoning which makes one group argue against improved machinery, specialization of work, or such a moral advance as elimination of the saloon because it will throw barkeepers out of work, is offset at least by that which argues against education or shop-training which will enable the worker to earn increased wages, or reduces the piece-rate when workers begin to earn high payments, or shuts down an expensive plant to the community's hurt during a period of lessened profits. But the intelligence at work on the problem of increasing production is being focused on the problems involved in bettering the human relations involved, and conviction is growing that herein lie tangible and

concrete advantages for the future, with sympathetic leadership above supplementing intelligent enthusiasm below.

Real democracy will be achieved in our industrial system when conditions are actually established that insure the more capable men in the more responsible places and guarantee fair treatment and just wages to all. The development of productive methods from a knack to a science will necessarily in the evolution emphasize the superiority of the type of management which extends equal opportunity to all and perpetuates itself by the most discriminating selection. Authority must in the very nature of things be exercised by management over productive force rather than the reverse, but it will be derived justly and utilized intelligently.

These are portentous times and it is hazardous to forecast developments of a world in convulsion. But, it seems certain that when peace comes there will be such attention given to forms of government and industrial systems as never before. The trend towards democracy will be definite and perhaps irresistible. The conditions of industry are likely to be more normal in the United States than anywhere else in the world. The comparative merits of industrial methods should best be known here. If they are known, they can be of inestimable worth in the necessary reorganization of the world's affairs. Especial responsibility, therefore, rests upon us that these should be days of careful appraisal of our industrial system, and the terms in which we define its methods.

It is no time for mushiness of thought. It is as little time for empty or misleading phraseology. If the meaning of "industrial democracy" is going to imply that management shall be divested of its authority or that tenure of management shall be subject to control by those who may resent its efficiency, it is descriptive of a condition which cannot even be desired. Unity of action for the common good is necessary that the ratio between population and production shall be preserved, and this is only possible by organization and the delegation of authority through which the work of those of less ability shall be directed by those of greater. Otherwise we cannot argue effectively for democracy. Radical as we may become in regard to the conditions which shall be prescribed by the governmental system for the conduct of the industrial system, or for the distribution of wealth after it is produced, it yet remains

true that the one great function of industry is production, and that this must be organized to secure maximum results.

A world's work is to be done. Losses are to be made good. Burdens heavier than those borne in recent years are to be assumed. These are responsibilities that industry must accept. If democracy as a theory of government is to be conclusively impressive, the industrial system which is subject to its principles must be convincingly efficient.

A FUNCTIONALIZED EMPLOYMENT DEPARTMENT AS A FACTOR IN INDUSTRIAL EFFICIENCY[1]

BY ERNEST MARTIN HOPKINS,
Manager, Employment Department, The Curtis Publishing Company, Philadelphia.

The most significant fact pertaining to industrial management today is the attention which is being given to the problems of personnel. Recognition is being given to the truth that new sources of power and evolution of mechanical processes have but changed the points, in methods of production, at which the human factor is essential, without changing to any degree the ultimate dependence upon it.

The impressive thing is not that some men recognize the importance of the individual worker, for this has always been true of some; it is that such recognition is so rapidly becoming general, since it has been so long delayed. Yet the causes are obvious. Power can be produced for A and Z with little variation in cost to either. Plant design has been standardized until one can gain small advantage over another herein. The same mechanical equipment can be secured by one as by the other. There is no longer marked advantage possible to the thoroughly progressive house over another, equally progressive and intelligent, in the securing of raw materials, in the mechanical processes of manufacture, or in the methods of

[1]Reprinted from the September volume of *The Annals*. This article is of such excellence and has met with such a favorable reception that the editors feel justified in reprinting it here in order to make this volume as complete as possible.

promotion and distribution. Wherein lies possible advantage of A over Z in the competition between them? Or the question may read for Z, how may he retain his prosperity in competition with A? This is one phase of the compelling logic which is leading to the study of problems of employment.

It becomes increasingly evident that the statement frequently made is universally true, if interpreted broadly, that the interests of employer and employe are inextricably bound together.

The social significance of questions relating to the mutual interests of employers and employes is so great that these could not have been much longer kept subordinate under any circumstances; but the utilitarian advantage to employers, individually and collectively, of scientific study of these problems has become so plain that the present general interest in them among industrial leaders can most positively be ascribed to the fact that, whatever else they are, they are a vital concern of good business.

It was logical, when industrial management reached the stage that its practices could be defined, and the preliminary studies made to separate the good and the bad, in course of reducing such management to a science, that attention should have been focussed first on processes, machines and buildings. These things needed to be right before the worker could realize his possibilities. It is to be recognized, however, that though the word "efficiency" came into wide use during this stage of dealing with inanimate factors, the word is entitled to the far broader significance which carries an import of all-around effectiveness. Industrial efficiency, under proper definition, does mean and must be understood to mean right workers and right conditions for them as distinctly as right machines and conditions designed for their best operation.

This is the broad principle on which the functionalized employment department has been established. It is simply the application of the same reasoning to finding and maintaining the labor supply that has already been applied in industry to problems of building, equipment, mechanical supervision, and the methods by which business is despatched.

There is this greater difficulty in establishing a functionalized department for employment and correlated responsibilities than in establishing a department for almost anything else, that however frankly men will acknowledge limitations on some sides, few

will admit or believe that they are not particularly perspicacious in their judgments of men. This is particularly true of those of circumscribed vision, whose advantages have been few and whose opportunities for developing breadth in their mental processes have been limited, as is the case with many minor executives or subforemen. Such an one feels, perhaps not unnaturally, that his prestige with the new employe is impaired if employment is secured through some department outside his own. Moreover, he is likely to ascribe to the employment department no other basis of appraisal than he himself has used, and with this as a premise, he argues that his own intuition is better than that of one who lacks his own intimate knowledge of the work for which he is responsible. Almost invariably, too, he fails to value to reasonable extent the loss to his own work which comes from the waste of time involved in interviewing and employing, even if he undertakes to do this with such care as that of which he may be capable.

Too much emphasis may not be placed, however, on the difficulties incident to establishing the employment department, for the foremost concerns have so definitely accepted the principle that it is bound to be accepted generally. It should simply be recognized that such a department cannot fulfill its function to become a large contributor to the success of the business unless it be given recognition and endorsement sufficient to gain for it coöperation from the departments with whose problems of personnel it must be in contact. A large responsibility rests upon the employment department to work carefully and considerately, with open mind and apprecation of the problems of others; but even so, occasional support in the way of instructions from above will be needed to give the department access to some parts of the field wherein its work should be done.

This raises the question as to the place of the department in the organization. There can be only one answer, if the installation of the work is made in good faith—it must be in direct contact with the topmost management, where its problems can be passed upon promptly and decisively by ultimate authority, if issues arise. More important than this, the creation and establishment of such a department in a business should mean that the avenues of communication between those in the ranks and those at the top, which too often have become closed as a business has grown large, are to

be re-opened. If this does not become true, the potentiality for good in such work can never be more than partially realized.

It is a duty that distinctly belongs to the employment office, to cultivate sympathetic knowledge of the opinions of workers and to bespeak these to the management. All industry is so set up that the word of the management can be quickly and easily transmitted down. It is no less of consequence to those above than to those below that some agency exists for facilitating the reverse process.

Industrial efficiency could not have been so definitely advanced as it has been without gigantic accomplishment in gathering data, codifying them, and the establishment of systems to realize benefits from the lessons learned. It is useless to expect that great businesses can be conducted without a great mass of prescribed routines designed for the greatest good in the majority of cases. But it is true that the necessary struggle for uniformity and system has involved the limitation of individualism to standardized types to an extent that raises some serious questions.

It is impossible to set limits to the advantages which may accrue to a business from such attributes of personality among its men as loyalty and enthusiasm, and yet personality cannot well be standardized. Herein the employment department needs particularly to be on guard in its own work. It must steer between the danger of following the foreman's method of picking men because he likes their looks or their manners, and a method so systematized and impersonal as to have eliminated all individualism.

It is for this reason that great caution is needed to avoid blind acceptance of methods from among the various systems evolved by the less careful industrial psychologists or advocates of character analysis. Much along these lines has been established which ought to be known and utilized to reasonable extent in the employment office. It is surely true that certain physical types are particularly adapted to certain forms of manual labor; it is as true that certain mental types have especial aptitudes which ought to be recognized in assigning them to work. Experimental psychology has taught us how to determine the mental defective and the moron, and is capable of doing far more for us. But there is a refinement of system proposed by some that is neither commercially profitable nor ethically sound, in that on the one hand, at large expense, it attempts

the standardization of personality, and on the other, it accepts unduly a theory of predestination which would largely limit the opportunities for proving individual worth.

There are, however, no differences of opinion concerning the desirability of standardization of jobs. This is not properly a responsibility of the employment office, but knowledge of what the respective standards are is one of its vital needs. If the data have not been gathered and made available, one of the most essential moves for the employment office in the establishment of its own work is to undertake such a survey of requirements of the work and opportunities for the workers in the respective departments and sub-departments as brought together will give a composite of the whole plant. Such a survey need not be made obtrusively nor need it become a nuisance to department executives. It will necessarily involve the expenditure of considerable time. But it is worth while doing, even if it has to be done very quietly and very slowly, for while it offers the most fundamental data for employment work, it likewise often shows such inconsistencies in practice that a company can markedly raise its average of efficiency, if only it brings the departments of lax or faulty standards somewhat up towards the grades of those which are being well administered.

Such a survey in its elementary form should show at least such facts concerning the respective departments as preferred sources of supply for new employes, education or special training required, any special attributes desired, initial wages paid, opportunities for advancement in position and possible wage increases, working conditions and working hours, and labor turnover.

The term "labor turnover," which has recently come into general use, even now is not fully understood by some, and is perhaps best described by the more brutal phrase in general use, "hiring and firing." The annual "hiring and firing" figures represent the percentage of labor turnover. For instance, if a company maintains a normal labor force of a thousand people, and is obliged to employ annually a thousand to compensate for those who leave or are dismissed, the labor turnover is 100 per cent.

Probably no greater argument for the establishment of a functionalized employment department in many companies could be made than to induce a study of the labor turnover figures. It is not an unusual experience to find employers who estimate the

figures of their own concerns at less than 50 per cent, when it actually runs to several times that figure.

It is to be noted that such figures, though illuminating in themselves, need further analysis to be of major use. For instance, seasonal demands may be such in the specified shop normally enrolling a thousand hands that two hundred must be employed periodically for a few weeks and then dismissed, their places again to be filled in a few more weeks. If this happens five times a year, the turnover figures will be 100 per cent. The other extreme would be a concern with such lack of knowledge of the money loss involved in change that practically every job was vacated and filled at least annually, when likewise the labor turnover would be 100 per cent. Such figures are much too high, but they are not infrequent. They likewise are expensive, but while in the latter case the concern in question would bear much of the expense, in the former it is more largely imposed upon the community. Working men or working women who, through no fault of their own, are deprived successively, time on time, of the opportunities to realize their earning capacities, inevitably suffer impairment of courage, self-respect, and even moral fibre, the loss of which falls first upon the community, but eventually upon industry, in the depreciation in quality and spirit of the labor supply.

It is extremely difficult to know what can be done to remove the seasonal element in employment needs in the majority of cases. On the other hand, much would be gained if, by analysis and comparison, foremen and sub-managers could be shown the futility and financial loss of the lack of comprehension which allows them to discharge carelessly on caprice, or for the maintenance of that perverted sense of discipline which they phrase as "keeping the fear of God in the hearts of their people."

There is so much advantage in having employes who know the ways and routines of a concern that it would seem that, except where dismissals are for sufficient cause, those suffering them would be preferred applicants for positions elsewhere in the company calling for like grade of ability. It is not often so, nevertheless, except where a well-established employment office or its equivalent exists. All too frequently, a reduction of work in one department of a large manufacturing plant will send workers out under dismissal, while some other department of the same plant is seeking additional help.

A rule which has been established in some large plants, and which has worked advantageously, is that no department can discharge an individual from the company's employ; it can only dismiss from its own work. In effect, this subjects the case to review of some higher official who holds the power of final discharge, gives the employment office a chance to utilize the experienced employe elsewhere, if of proved capacity, and acts as a healthy check on the impulsive high-handedness of certain types of foremen and submanagers. Another rule which works to somewhat the same effect is to require advance notices to be filed with the employment office concerning projected dismissals, together with the reasons therefor.

Other statistics which will interest the progressive employer may be compiled, showing the degree of permanency of the labor force—thus, the percentages showing what proportion of the total enrollment has been employed less than a year, what proportion for between one and two years, and so on. Not infrequently it will be found that these figures reveal employment conditions quite apart from the theories of the head of the house and contrary to his belief as to how his business is being run. A manufacturer employing about four thousand men told me recently that he had genuinely believed that a large proportion of his men had been with him from ten to twenty years, only to find from such a statistical table that 50 per cent had been there less than two and a half years.

Incidentally, it may be suggested that some of the easy generalizations which have been made from time to time in regard to the lack of stability of workingmen as groups, because of the presence therein of so-called "floaters," would be materially altered if it could be known to what extent it had been beyond the volition of workmen of unquestioned skill to remain permanently placed. In general, the handling of dismissals has been dictated by the intelligence of sub-executives rather than by the intelligence of the management, and there has been no supervision from above.

The functionalized employment department is dependent, for successful accomplishment, in particularly specific ways upon the smoothness with which its work can be made to articulate with other functionalized departments, such, for instance, as the accounting department, the schedule or routing department, and other like ones. It must rely on these for the data to prove much of its own

work, and in turn it may find within its perspective facts highly important to them. Through the large number of its interviews, it should come to have an unusually comprehensive knowledge of current rates of wages for established grades of work. It ought, furthermore, to come into position to know to what extent the law of increasing returns will apply to additional rates of pay established to secure superior ability.

It is probably due to the fact that the attention of industrial leaders has been fixed in the past so intently on problems of power, plants, and machines that so little practical recognition has been given to the fact that the most efficient worker, even at considerably increased cost, is far and away the most profitable. The most obvious demonstration of this exists perhaps in the case of a shop filled with expensive machinery working to full capacity, yet with its production falling behind its orders. Would there be any hesitancy if its management could have an option offered between added efficiency and enthusiasm among its employes that would increase its potentiality a half through the enrollment of its labor force on the basis of capability to earn a largely increased wage, and the alternative of the necessity of adding 50 per cent to its plant and mechanical equipment? The truth is that seemingly there is not yet any general understanding among employers that a high gross payroll does not necessarily result from a high individual wage, or expressed in slightly different terms, that the cost per unit of production may be larger the lower the rate of pay to the individual worker.

A somewhat analagous principle is involved in the matter of working hours per day. The old-time practice indicated a theory that if so much work could be accomplished by a working-week of sixty hours, 20 per cent more could be accomplished in a working week of seventy-two hours. Reduce these figures to fifty hours a week as compared to sixty, and the theory does not seem to have been so completely discarded even now. Yet the facts are available from modern investigations of the physical and nervous reactions from fatigue, lack of variety incident to refinements of methods in specialization, and want of time for recuperative processes, to show that up to some definite limit actual gross production may increase under reduction of hours; or that up to some other limit a much larger proportionate production per hour of work may be secured.

Moreover, these arguments have been proved again and again in the actual operations of progressive companies.

It is not to be understood that the employment department does have or should have final authority to govern these policies. But the department is in a position to study and compile data regarding these problems as very few other departments can; and either in initiating or contributing to investigations of all such matters affecting the human relations, it has opportunity for rendering the most valuable kind of staff service to the general administration and to departments associated with itself.

Industrial efficiency, with all its vital importance, is yet a means to an end, and not the end itself. It is the quality or manner by which a highly desirable result is to be accomplished, but it is not the result. It has too often happened that an earnest advocate of efficient methods has become so engrossed in the technique of his profession as to ignore its purpose, to the consequent detriment of the general cause.

So it may be too easily with functionalized employment work. An office may be set up under the direction of a master of system, which in its operation shall be a model of method. Interviewing of applicants, filling out of skillfully devised applications blanks and filing them, and creation of numberless card records may be so conducted as to show these things to have been reduced to an exact science, and yet the value of the department remain problematical.

Of course, no effort must be spared to have the ways devised by which the best possible candidates shall be offered and chosen for the respective kinds of work. But the work is incomplete if it stops here. The good of the business is the criterion by which all accomplishment must be judged. If a high grade of labor has been secured, the company's interests demand that the environment, the conditions and the opportunities shall be made such as to hold it. The employment department cannot omit any legitimate effort to influence policies to this end. It must work helpfully and understandingly with other departments, without pride or arrogance. But it must work unceasingly with clear vision toward the goal of making its distinct contribution to the company's prosperity through the improved human relationships which it may help to develop.

THE AIM AND WORK OF EMPLOYMENT MANAGERS' ASSOCIATIONS

BY MEYER BLOOMFIELD,
Director of the Vocation Bureau of Boston.

The handling of employes is so important a matter that those engaged in it must prepare, and in time will be bound to prepare, as for a profession.

It was in order to bring out the professional ideas involved in this kind of work that those in charge of hiring and supervising employes in a number of Boston establishments were asked to come together four years ago and exchange ideas and experiences. In looking over the then existing associations which might take interest in a program of systematic study of employment management problems, there did not seem to be any which could devote itself in any large degree to such matters. Indeed very few employment managers, or other executives closely related to employing duties, were members of these societies.

There were organizations of credit men, advertising men, accountants, buyers, and many other kinds of trade and business bodies, but never before, so far as the writer is aware, have men in charge of the employing phases of management, the men who pump the life-blood into an establishment, been brought together to consider the nature of the problems their vital work involved.

The fact is, generally speaking, that the employment department has been a much neglected phase of industrial organization, and the person in charge of this kind of work has been rather overlooked in the management scheme.

Several reasons account for this oversight. Employing people and understanding them have not been generally regarded as more than an incident in management. Duties of this nature have been looked upon as unproductive, if not as a necessary evil. In consequence, the men placed in charge of this work were not always the best type procurable nor of the education the work calls for. Notable exceptions in this respect only prove the general rule of practice. Because the department, then, was not seriously considered, and because a petty subordinate was often placed in charge, the heads

of a firm could not think of this aspect of the enterprise as of the same importance with other functions, such as finance, production, and sales. When grave problems of industrial relations presented themselves, the head of the firm or some other important executive would indeed take deep interest in their solution. Experts, lawyers, and others would be consulted. Perhaps a welfare department, in some cases, would be expected to cope with the issues arising. But the department in the very best possible position to know the facts, the needs of the employes, and the methods best calculated to bring about proper relationship and just treatment, the employment department, has rarely been looked to for help, constructive work, and expert knowledge.

This situation is largely responsible for that great waste known as the labor turnover. It is also responsible for much preventable friction and misunderstanding.

A change for the better has come about since the formation of the first employment managers' association in Boston. The change is not, of course, primarily due to this effort. Other causes have been effectively at work. The movement for employment executives' associations is to some extent a result of wiser methods of management, a more enlightened spirit in industry, the vocational spirit in education, the pressure of employes for better understanding of their needs and desires, and numerous investigations into the social aspects of employment. The formation of employment officers' associations have been, however, a marked influence in the direction of better management methods and a new energy in the study and treatment of personnel problems.

For nearly four years a new type of association, already referred to, dealing with the problems of hiring and developing employes, has been at work in Boston. During 1911, the Vocation Bureau of Boston invited fifty men, who had in charge the hiring of employes in large shops and stores of the city and vicinity, to come together and consider the advisability of meeting regularly. As a result, the Employment Managers' Association was started.

The aims of this association are described as follows in the constitution:

> To discuss problems of employes; their training and their efficiency.
>
> To compare experiences which shall throw light on the failures and successes in conducting the employment department.

To invite experts or other persons who have knowledge of the best methods or experiments for ascertaining the qualifications of employes, and providing for their advancement.

It will be seen that the aim of this new association was to provide a professional medium for the exchange of experiences in a field where little interchange of ideas had taken place; to study the human problem in industry on the basis of fair dealing with the employe. In short, there was a conscious effort to make industrial practice square with the dictates of twentieth century enlightenment. The following programs and outlines give an idea of the society's work:

EMPLOYMENT MANAGERS' ASSOCIATION

Activities Suggested For Year of 1916

COMMITTEE WORK

Group Meetings

The problems in which the Association is interested will be divided roughly into four groups, as follows: Selection of Employes, Training, Management, Special Work among Employes. A committee will be apointed to consider the phases of each division. Each committee will arrange to meet once a month to discuss the different topics in the main division assigned to it. These meetings will take the form of round table discussions and will be open to any member who wishes to attend. From time to time reports will be submitted to the regular monthly meetings of the Association for fuller discussions.

These round table committee meetings will be held at a mutually convenient time, 5.30 to 7.00 p. m. on Friday at the City Club, is suggested. As there will be four committees this will mean that every Friday there will be held at the City Club one of these round table discussions lasting about one hour and a half and adjourning in ample time to allow participants to keep other engagements, but each committee will only have one meeting a month.

SUGGESTED TOPICS FOR COMMITTEE WORK

Selection of Employes

Sources of Supply; Methods of Securing Applicants; Examinations (general, mental, physical for special positions); Standard Application Blanks; Investigation of Credentials; Relative Value of Qualifications; Choosing between Applicants; Selection of Young or Inexperienced for Training and Promotion; Value of Immigrant Labor; Value of Previous Training and Education; Necessity of Planning for Future in Choosing Employes; Keeping Track of Former Employes; Waiting List; Coöperation with Foreman, Superintendent and Heads of Departments.

Training Employes

Necessity of Immediate Preliminary Instruction; Instruction in Shop; Special Classes; Company Schools; Outside Education; Part Time Schools; Continuation

of Night Schools; Technical Schools; Need of these in each Industrial and Business Community; Correspondence Schools; Training for Promotion; Coöperation with School Authorities to Secure Proper Preliminary Training; Defects in Present Educational Methods from Employers' Standpoint; Vocational Training, its Value to Employers; Danger to Employes' Health in outside Educational Work.

Management

Advantage of Proper Surroundings and Conditions; Hygiene; Morale; Securing and Retaining Interest; Enthusiasm and Loyalty; Shop Rules; Piece Work; Accident Prevention; Advantages of Employes' Organization; Transfer from One Department to Another; Promotion; Weeding out Undesirables and Inefficient; Cost of Breaking in New Employes; Eliminating Turnover; Cost of Shutdown; Discharge.

Special Work Among Employes

Health; Recreation; Rest Rooms; Thrift; Insurance; Pensions; Credit Unions; Bonus Systems; Profit Sharing; General Advice; Living Conditions; Social Life; Vocational Aid and Advice; Help in Securing a Better or more Suitable Position.

WEEKLY LETTER

It has been suggested that there be issued at frequent intervals a *Bulletin* in letter form containing in addition to Association notices a *List of positions* open at the plants of the different members and a *Question Box* where members may ask for information in regard to any particular problem or subject.

GENERAL WORK

The *Monthly Meetings* will be held as usual on the second Tuesday of each month, and the larger problems will be discussed at these, sometimes by outside speakers, but generally by members.

Visits to establishments represented by various members are being arranged. There will probably be one of these each month.

As the opportunity permits there will be compiled a general *Index of Information.* Here will be listed (1) Subjects and problems which have been investigated by members individually, their firms or by committees of the Association; (2) Books and monographs on problems of employment management; (3) List of employment bureaus and agencies; (4) A list of educational and training schools available to employes; (5) General information regarding labor legislation.

The Secretary will be glad to be of service to members at any time subject, of course, to the demands of his other work. Office telephone, Fort Hill 1715, resident telephone, Lexington 21–M.

ABSTRACT OF DISCUSSION AT TWO MEETINGS

Tests

Our methods, said the employment man of a street railway company, in the selection of motormen has been briefly, personal interview. That is as far as we go in grading the mental traits of men. We are with him five or ten minutes, find out where he works, his age, his education, the different places he has been employed since he left school, what he did, why he left. He is tested in eyesight

—color as well as view—also in weight. He fills out an application blank. The different parties he worked for are referred to. Social references are looked up. And these are compared with his personal statement. By this method you can get an idea as to his standing. If he is accepted, he is placed in charge of an experienced motorman. That man does the testing.

He takes him over the various lines and his tests are practical ones. He is shown how the work is done. He is shown the mechanism of the car and gradually worked up to the full responsibility of handling the car. At first he will take the handles for a short time, where there is little to contend with—where there are no obstructions. Later, he is given the handles for the entire trip. The instructing motorman is right beside him. He will meet all the obstructions and trials that confront a motorman in his daily work. These are the real valuable tests.

When it comes to the last day or two, the motorman actually leaves the front platform altogether, and the man feels he is actually responsible. Then he is down on his own resources. While there is somebody beside him to help him, you have no real test, because he feels that the responsibility rests with somebody else.

The real test would be to have a track—a short line—especially constructed at a nominal expense and have certain obstructions all ready to drop down in front of the man as he goes along. That is a real test, in my opinion a real test. A motorman is going along when suddenly he gets three bells. The conductor may do that to test the motorman, to see how quickly he can stop his car and how he does it.

Discharge

We may be peculiar in the amount of stability of our organization. Our foremen are as nearly experts as in any industry with which I have come in contact. The average time it takes to reach such a position as that of foreman is from ten to fifteen years. In that period he has instilled in him more or less of the disposition of the management in regard to discharge.

Where foremen come and go quickly this function might be dangerous to place in their hands without any strain. A few figures to show how it works out with us:

In the year 1915 we had 669 cases of absolute discharge during the year. Upwards of 16,000 people are employed; the percentage is not large. Of these 669, 424 have been in the service under three months; 105 more than three and under six months. A total of 529 of the 669 had been employed less than six months; a total of 140 had been employed over two years, less than 1 per cent.

As the term of service increases the number of those discharged decreases. Only 23 who have been in the service from three to five years and only 17 over five years have been discharged, which illustrates the stability of our organization.

In the case of the discharge of a man who does not necessarily leave the employ of the company: Where there are a number of rooms practically the same in character—25 or 27—a man discharged by one overseer might be taken into another department where he will give entirely satisfactory services.

When the employment department was first organized it was thought unwise to take away from our foremen the right of discharge. It was thought that a

check should be placed on the foremen's action and they were accordingly instructed not to discharge or terminate the services of anyone without notifying the employment department. The employment department interviews every employe who leaves, either voluntarily or discharged for cause.

They feel that sometimes the foremen are hasty and employes are discharged when other means can be used to discipline them and thus save an experienced hand for the company. The employment department was responbible for saving eighty experienced people for the company by transferring them to other departments.

The transferring of the control of discharge from the foreman to the employment department has been very successful. Next year I think the department heads will be instructed to dismiss no one except by the consent of the works manager; he will delegate this to the employment department.

Since the starting of the Boston organization, other cities including New York, Philadelphia, Detroit and Chicago have formed similar societies. The present indications are that a country-wide extension of such organizations will take place, because the idea underlying them appears to be fundamental, and in accord with the aims of both industry and social service.

If such extension, then, of employment executives' associations should take place, the time is opportune to consider their purposes, and their possible contribution to good management and right industrial relations. Bearing in mind the fact that the original effort for such type of association came from an institution, the Vocation Bureau, whose chief aim is the promotion of opportunity, the trend in such associations should be along the line of enlightened thinking in modern industrial organization. If their growth remain true to the initial aims, such associations are in a position to help unravel the tangled problems of misemployment, underemployment and unemployment, and the waste of human capacity in general.

When everything that present-day science can suggest in the way of improving technical efficiency in systems of cost-keeping, equipment, machinery and material has been adopted, the biggest of all industrial problems still remains to be faced.

This is the problem of handling men. Every thoughtful employer knows that managing employes, selecting, assigning, directing, supervising and developing them, is the one phase of management which is most difficult and complicated; and it is the one problem in industry which has in the past had least consecutive thought bestowed upon it. Not that employers have been unaware of the

size of this task. Experiment after experiment has been tried with varying results, all of them aiming at the goal of welding the working force into a stable, dependable, and well-assimilated organization. And yet such organization is not common.

Figures as to change in the working force of various establishments are not easy to obtain, but enough are at hand to indicate an enormous leakage of employes each year in the average store, factory, and other places of employment. Many a concern employs each year as many persons as its total payroll. That is, there is a "turnover" of employes amounting to 100 per cent. The figures range from one-third to many times the total number of employes. How many employers have figured out just what it costs in dollars and cents to change an employe? How many have estimated the cost in terms of organization, loyalty, steadiness and *esprit?*

Obviously, an organization cannot be held together with ropes of sand. The coming and going of employes on such a scale as the data available would indicate cannot but prove a disintegrating force, a foe to sound organization, a source of unceasing mischief.

Employers, of course, appreciate more or less clearly what all this means. But few, however, have set themselves to study this problem as it should be studied. Some have with unhappy results expected miracle-workers to solve this problem, and have toyed with strange employment schemes. Some employers have trusted to sleight-of-hand performances in hiring men instead of dealing with their big problem in the way they deal with other knotty problems. If to psychology they must turn, a psychologist and educator like Prof. E. L. Thorndike of Columbia, for example, could have shown them that the application of science to the problem of handling men involved long and painstaking, not to say exceedingly laborious, investigation. There is no royal road to solving the man-problem in industry. But there are ways, intelligent, common-sense and practically understandable ways, of setting to work. There are certain principles to be observed, methods to be adopted and standards to be maintained in dealing with the question of personnel, and adhering to these can alone insure a reasonable degree of success. In any event the waste and friction now involved in the average treatment of the hiring problem can be materially reduced.

In the first place, the proposition must be firmly grasped that handling employes is a serious business. Not everybody can or should hire; not everybody can supervise men. But it is to the employment department of the establishment that we must look for a solution; to its powers, duties, functions and place in the scheme of organization. And above everything else we must look to the character, training, equipment and place of the man who does the hiring.

It is at this point that thought can be most profitably bestowed. A new conception is needed of the functions of the employment department, and the qualifications of the employment superintendent. Not every concern has a special employment department, although the large establishments are giving up the system of hiring by department heads, and concentrating the selection of employes into a separate division. More and more the need is recognized of functionalizing the hiring and handling of men. Without such specialized treatment of this problem it is impossible to give the matter the attention which it requires. Moreover, the power to hire and discharge extended to a number of individuals has given rise to abuses and frictions which have cost the employer dearly. Nothing is more fatal to sound organization than such power without adequate supervision. Petty executives should never be entrusted with this vital function. Right relations cannot be secured by such a method. Hiring men and discharging men are serious affairs. Only big men can handle matters like these. Costly experience has settled this proposition. The human problem calls for its solution the best men and the most expert consideration.

The quality of the working force determines in the final analysis the quality of the organization, of its product, of its success. Nowhere is this fact more evident than in the organizations which sell service; for example, department stores and public service corporations. The point of contact between the business and the customers and the channel of communication are always through the individual employe. The business is summed up as to its standards by this outpost in the person of saleswoman, telephone operator, or car conductor. Good-will is made or unmade according to the type of representative. The larger the organization, the more the units of contact. Business may be essentially impersonal, but it is highly personal in its service features. The teamster,

driver, stenographer, floor manager, claim adjuster and scores of others act in a personal sense and with individual customers.

Who selects these people? On what basis are they selected? Is it all guess-work? Is it possible to standardize the work of selection? The business man who has not already asked himself questions such as these will do so before long. The whole drift of the time is in the direction of greater attention to the proper selection, supervision, and development of the individual worker. Such attention is no longer a by-product of other responsibilities. It is no longer an inferior man's job.

The employment function is so important to good organization as well as right relations that the hiring office must be looked upon hereafter as one of the vital departments of a business. Somewhere in the scheme of organization provision must be made for a well-equipped office to deal with the many problems concerning personnel. Only through such specialization can the solution be approached. In the first place, such office or department alone can deal with the task of scientifically organizing the source of supply of help. To depend on applicants at the gate, to hang out a want shingle or to advertise through want columns or the medium of other employes is too haphazard a method. Raw material is not procured in this way. Scientific purchasing requires a study of markets, testing out of material and figuring of conditions. There is here no higgling and blind bargaining. The laboratory is frequently used to render the final verdict in favor or against a certain purchase.

Why has the hiring of men been permitted to go on with less systematic scrutiny? One reason has been the surplus, the labor reserve. This will not long avail, first, because industrial conditions and legislation are working to diminish, if not wipe out, the excess of applicants for work on the fringe of every industry; and second, because wise business management recognizes the good sense of organizing the source of labor supply in connection with an organized labor market.

Source-organization assumes various forms. In the case of prospective executives, some large establishments employ "scouts" (not unlike those of major baseball leagues, who range the minor circuits for promising players), who visit periodically the colleges and other institutions and discover the men of promise. One of

the leading manufacturing companies of the country is noted for its post-graduate business opportunities. Indeed, it has built its entire executive force practically out of the findings of its scouts. Another establishment recruits its rank and file from a careful canvass, a block-by-block, and a house to house visitation of neighborhoods. One of the leading department stores in the East has made special arrangement with the high schools of its city and suburbs to send during Saturdays and vacation periods boys and girls for try-out work. They are fairly well paid during the probationary period. When they have finished their school work, positions are awaiting them, based on the observations and the records of the employment department which is charged with this duty.

A study of the source of supply, then, is the first interest of a properly organized employment office. Ample powers are given such offices to reach out and tap the best reservoirs. There is no reliance placed on securing a competitor's help. The aim of such offices is to develop its own material from the raw. Permanence of work is secured by the fact that fitness for the work required is carefully ascertained in advance. Discharge is not in the hands of a variety of sub-bosses. Whim and prejudice are eliminated. The employment office aims to secure employes who will find it worth while to stay.

To help in the proper appraisal of the employe's qualifications, the office keeps complete records, reports, observations and other data. Each employe may consult the file belonging to him. His story is on file, impersonal as a barometer. But the most important record of all at the start, in the right sort of hiring office, is that which begins with the application blank.

As one studies the application cards of various concerns one reason for maladjustment becomes clear. So little analysis of the work required has been undertaken that we have practically no specifications, no *blueprints* of job-requirements in order to enable an applicant to measure himself against the actual demands. Hit-or-miss is the prevailing method. The hiring office properly managed knows that a well-devised application and record blank is one of its first tasks.

Some time ago the application blanks of fifty corporations were collected. If one cut off the firm names, there would be difficulty

in identifying from the material the nature of the business it pertained to. The blanks showed little understanding of the specific requirements of the various occupations. There was little differentiation in the questions asked. Employes cannot be properly selected on such a basis. Each establishment must work out its own needs and demands and record them in the hiring blank. No conventional forms will do, unless selection be wholly given up.

In brief, to one who observes the current practice of hiring and discharging employes, the conclusion comes home with peculiar force that in no other phase of management is there so much unintelligence, recklessness of cost and lack of imagination. On the other hand, in the right organization of the employment scheme there would seem to be endless possibilities of genuine service, a service not possible even in the most benevolent of welfare projects.

The situation on the whole suggests the need of recognizing a new profession in the organization of industry—the profession of hiring and developing men. Executives will have to be trained for this work as they are trained for other important responsibilities. The employment manager, the executive within whose duties falls the direction of the personnel, must be prepared for this work as for a genuine profession. The handling of men in this century will call for unusual preparation in the way of understanding and a spirit of justice.

To seek a professional basis for the work of handling men, and a definite training course of preparation is not a novel idea when one considers how many other tasks in business management have been brought under such direction. College schools of business training, and all engineering schools have had to do pioneer work in applying science and organized experience to familiar pursuits such as accounting, salesmanship, banking, railroad practice, and management. The Tuck School at Dartmouth College, and the Wharton School at the University of Pennsylvania, to name two examples of forward-looking institutions of business training, have been simply true to the original motive of their foundation when they undertook to organize employment courses as proper subjects for instruction.

A long period of time may be needed before such courses contain standard and thoroughly valuable material, but until they do, they are still in a good position to gather the best available material,

analyze the best practice and systematize the thinking and research into the problem. In the meantime the management world is laid under obligation to these institutions for their pioneering spirit and their placing themselves in a position to make a contribution to what many now regard as the most important phase of management.

In the growth of employment management societies and in the closer connection between them and management training courses, both employer and employe may find valuable assistance in overcoming waste and in developing new possibilities of coöperation.

THE WORK OF THE EMPLOYMENT DEPARTMENT OF DENNISON MANUFACTURING COMPANY, FRAMINGHAM, MASSACHUSETTS.

By Philip J. Reilly,
Employment Manager.

The employment department of the Dennison Manufacturing Company was established on its present basis on January 1, 1914.

This department was expected to improve the human relationships and to reduce the labor turnover of the industry (a) by making a careful study of the requirements of its various occupations; (b) by engaging persons who could best meet those requirements and see that they were adequately instructed; (c) by transferring to other occupations any promising employes who were unadapted to the first job; and (d) by heedfully noting the reasons given by employes for quitting, so that steps could be taken to eradicate any common cause that was making employes dissatisfied and causing them to leave.

Although studies of other phases of employment work were of assistance, it was mainly through the careful study given to the foregoing divisions of placement work that the employment department was able in a large degree, to accomplish the expected results.

In the Dennison factory about 10 per cent of the force of 2,200 employes are engaged in the so-called skilled trades. This small group represents machinists, electricians, carpenters, compositors,

electrotypers and pressmen. The balance of the force represents those who were unskilled when they were engaged. Many employes in this group, however, are on jobs which require just as long an apprenticeship and whose requirements are just as exacting as the "skilled" trades. Of this larger group about 60 per cent are females and 40 per cent are males, and those in this group follow some 150 different occupations, many of which will be found only in this industry. The chief problem in selection has been to obtain satisfactory non-skilled employes for these jobs.

The employment department prepared and has on file written specifications covering each of the jobs for which non-skilled labor can be hired. These specifications were prepared with the coöperation of the head of each factory department. They contain all the information that each foreman's experience could yield that was of value in selecting employes for every occupation in his department.

These job specifications also contain a brief description of the duties of the job; the schooling or the sort of experience that is desirable in an employe; the posture of the employe, that is, whether employe will be sitting or standing, stooping or walking; the preferable age, weight and height of an employe; whether employe should be right or left-handed; the starting wage; the time taken by an average employe to earn an advance in wages; the probable maximum earnings of the position, and whether the job is steady or seasonal.

The information revealed by these job analyses led to a grading of jobs according to the usual maximum earnings of each. The positions having the lowest earnings were designated as "C" positions; those with a little higher wage range were designated as "B" positions, and the most desirable places of all with the highest wage range were designated as "A" positions. By grading positions according to the wage range of each group, the employment department was able to fill vacancies in grade A by transferring an employe from a grade B position, or if none was available by transferring an employe from a grade C position. This policy of promotion from within opened new channels to advancement and has resulted in the organization obtaining a higher type of employe for the grade C jobs, because even these have the "prospects for advancement" which are needed to sustain the interest of the new employe who is ambitious.

Requisitions for new employes are sent on a printed form to the employment department. These are usually sent at least several days before the employe is needed. For this reason the industry is able to select applicants from its waiting list who are working elsewhere but who can be released from their employment by giving adequate notice of their intention to change. Applicants are asked to give this notice to their employers before they are engaged by the Dennison factory. This reminds them of an obligation that they should discharge and this custom has resulted in their invariably notifying, several days in advance, their department foreman in our business of their intention of quitting.

In selecting from our waiting list an applicant for a given position, we review the information which the interview and application blank have revealed. If it is decided that an applicant can meet the requirements of a certain job, we then give consideration to any influences external to the industry which may cause the applicant to leave. We ascertain why he seeks employment with us; where he regularly lives; what his earnings were in his former position, and why he left it. In most cases we can get in addition other information from persons in our employ, the names of whom are usually given by applicants as references.

When an applicant is engaged, the requirements of the position he is about to fill are clearly outlined to him. For this purpose the job analysis is followed so that every point which should interest the new employe will be covered. On the subject of wages, care is used to underestimate slightly the probable earnings so that the new employe is not misled by a too favorable outline of the job. He is informed concerning the hours of employment, of the advantages that come from steady work and of the aims of our organization.

When an employe reports for work he is given a copy of our *Book of Information and Instruction,* on the cover of which is printed his name and his department number. This book explains the industrial service activities of our company. This includes an explanation of the Dennison suggestion system, under which employes may obtain cash awards; the advantages of membership in the mutual relief associations; the operation of the factory savings and loan fund; the circulating library, and other company activities which offer many advantages to the employes. This book also

urges employes to avoid accidents and explains the provisions of the Massachusetts workmen's compensation law, under which all employes are insured.

The new employe is then sent to the training department where he is taught the special knowledge necessary to equip him for his position. He is shown the most approved and best methods for doing the work, as determined by the time study work of the efficiency department. He is taught such correlated knowledge as the principles of machine constructions, how the materials he uses are made, and how to care for them. When the employe is familiar with the work he is to do, and is able to earn a specified wage, he is transferred to the actual manufacturing department.

The purpose of this training department is twofold. Its first function is to fit the new employe for his particular work in the plant. It relieves the foremen of the trouble and expense of breaking in new help. It is supposed to do the work more quickly and more thoroughly than the foremen have time to accomplish. Its second function is to pass on the vocational aptitudes of the new employe. In a plant with so many different classes of work, it is impracticable to predetermine the exact aptitudes that the applicants for the work may have. Psychological tests may do this in the future, but for the present actual experience at the job is the only safe guide.

The employment department follows up the new employe during the first three months. If he is succeeding on the job his wages will be advanced at an opportune time. Advances in wages are recommended in writing by department heads after each monthly examination of their pay roll. The productive records of the employe are referred to when such recommendations are made.

These recommendations are sent to the employment department and are checked against the records of each employe which are on file there. In addition to the name, age, rate of wages and length of service of the employe, this record shows the number of suggestions and the number of errors made by him.

Usually the pay recommendations are approved by the employment department and sent to the works manager for final approval. If a recommendation is questioned by the employment department, however, the reasons for not approving it are given to the works manager, who will not approve the recommendation unless some

additional reasons for approving it are given by the department head.

If an employe has not succeeded in the position in which he was placed, the employment department then takes up the matter of moving him to another department or of dismissing him entirely from the service. Complete information about an employe's shortcomings is obtained from the department head. Based on this information and upon an interview with the employe, a decision with respect to disposing of the employe is made.

The matter of transferring employes from one department to another required very careful study when the employment department was organized. Department heads in the past had passed on to one another many incompetent employes, and most of them looked with suspicion upon any new move to give employes a second trial at another job.

The policy of transferring employes from one department to another to promote them as well as to give another chance to the promising employes who failed to "make good" on their first jobs, however, has changed the attitude of the department heads towards transferred employes, and the industry now saves many employes to its service who would otherwise be lost. The reasons for transferring 219 employes in 1915 were: Advancing employes to better positions in other departments, 40 per cent; changing employes who asked to be placed on another line of work, 4 per cent; changing employes who were not adapted to the first job in which they were placed, 18 per cent; changing employes to other work when seasonal work for which they were engaged was finished, 29 per cent; changing employes to other positions for miscellaneous reasons, 9 per cent.

Transfers of labor are recorded in the employment department only when an employe is taken from one department and placed in another under the supervision of a different department head. Employes may be advanced from one position to another in the same department without that fact being recorded in the employment department, or they may be changed from one kind of work to another within the same department. If this change is occasioned by the fact that the employe has not made progress on the first job, the employment department is notified.

The Dennison company has made a careful study of how to regulate the manufacture of seasonal goods. It has persuaded its

customers to place orders very early in the year for holiday goods. It now makes large runs of staple articles at periods of the year in which many of its facilities were formerly idle. It has developed an extensive line of specialties for St. Valentine's Day; St. Patrick's Day; Easter and patriotic holidays which come during the first part of the year, and for which it employs the same machinery as was formerly used only for Christmas specialties. By dovetailing these activities it has kept its trained hands steadily employed, and has greatly reduced labor turnover and labor costs.

When an employe decides to leave the company, notice of this decision is usually given a week in advance. The employment manager interviews the employe and records the reason on a printed "Leaving Slip." An effort is always made to get the true reason. Instances where an employe is dissatisfied either with his wages, his work or the conditions under which his work is performed, are of especial concern to the employment department. If any employe has suffered an injustice steps are taken to prevent a repetition of the complaint. Because the employment department has been interested to record the reason given by each departing employe for leaving its service, and to tabulate this information at intervals, it has been able to discover a number of common causes of dissatisfaction which resulted in large numbers of employes leaving.

This information resulted in remedial recommendations being made which, when adopted, almost immediately resulted in stopping the exodus of dissatisfied employes. The number of employes lost by this company in 1913 because they were dissatisfied for one reason or another, probably was no greater than the number lost for similar reasons by other industries, because the average labor turnover of this industry was no worse than the average labor turnover of other industries in its class. However, by reason of the steps taken by the company to remove causes that tended to make employes dissatisfied, it was able to reduce these cases to such an extent that the total number recorded in 1915 represents only $17\frac{1}{2}$ per cent of the total number who left in 1913 because they were dissatisfied either with their wage or their work. This appears to be a remarkable showing when it is remembered that there are always in every industry types of restive employes, small in numbers to be sure, who seem to be dissatisfied with any job no matter how advanta-

geous appears the opportunity for advancement it offers or how fair its wage may be.

When it is necessary to discharge an employe, the department head notifies the employment department of his intention and states the reason for such a step. After considering all of the circumstances, sometimes another trial is given to the employe, either on the same job or on another job. In the event of an employe being discharged the department head could not prevent his being placed in another department if it was decided to re-engage the employe later. The works manager only is empowered to exclude absolutely an employe from the organization, and this is done only in very rare cases.

The effectiveness of the work of an employment department is usually judged by the extent to which it has succeeded in reducing the changes in the personnel of its industry. Needless labor turnover is an expense that burdens many industries. A conservative estimate is that the expense of replacing an experienced hand averages $50 in this industry. On this estimate the savings represented by the reduction which has been effected in the labor turnover since the employment department was established on its present basis approximates $25,000. The figures of labor turnover for this industry, which represents not only employes who quit work but also all who were laid off or dismissed for any causes, were: 1911—68 per cent; 1912—61 per cent; 1913—52 per cent; 1914—37 per cent; 1915—28 per cent.

Although this marked reduction in the changes of the working force is in itself a sufficient justification for establishing and maintaining a central employment department, the Dennison company feels that other values in addition have accrued from the deeper study it has given to its employment problems.

It has been worth a lot to learn from its own experience, for example, how vital to the contentment and efficiency of a working force it is to have as foremen men who, in addition to good judgment, have a manner that invites the friendship as well as the respect of employes.

In the departments headed by men of this sort, an employe was rarely distressed because a reasonable request had not been readily granted or because the foreman's attitude in handling a matter requiring tact as well as firmness had been such as to invite

friction. Foremen who were unfeeling and arbitrary in handling matters unimportant in themselves, had caused many valuable employes to leave the industry, despite the fact that their earnings were very high and that their work was very interesting.

It has been well worth while also for the industry to have maintained through its employment department a point of contact with the employes that has resulted in their feeling free to express themselves with reference to the adjustments that they thought should be made in their work or in their wages, whenever a foreman seemed to them to be insensible to their deserts.

It is because the employment department has been in a position to render such effective coöperation to heads of departments and to extend such encouragement to those employes who may have found themselves temporarily out of harmony with their work environment, that its work in this business has been so well worth while.

THE EMPLOYMENT WORK OF THE CURTIS PUBLISHING COMPANY

By Robert C. Clothier,[1]

Employment Manager, The Curtis Publishing Company.

The raising of the standard of efficiency of the working force, individually and as a whole, in order that the purchasing power of the wage-dollar may be increased—this, as we interpret it, is the broad function of the employment department. It is not my intention to give you a finished speech tonight, for two reasons: first, because of a certain constitutional inability to do so; and second, because, although we feel that we are making progress in our efforts at human engineering, yet we have a long road to go before we even approach the end; so my paper tonight will be devoted merely to telling you about what we have succeeded in doing and in some measure what our plans are for the future.

The phrase "employment department" would be a misnomer if

[1] Paper read before Philadelphia Association for the Discussion of Employment Problems, April, 1916.

it were allowed to convey the idea of a department maintained merely to keep in touch with the labor market and to engage employes. Its function is infinitely broader. Summed up in one sentence, the employment department is the department whose duty it is to develop the efficiency of the workers, directly or indirectly, and to bring about a condition in which the individual employe will render as nearly as possible 100 per cent to his employer. The word "employ," therefore, should signify the care and development of the employes rather than the mere act of engaging workers and placing them on the payroll.

Personal efficiency is a composite article. It is composed of various proportions of brains, health, instruction, loyalty, enthusiasm, ambition, ability to coöperate, personality and character. If in each of our employes, we can develop these traits to the maximum, our product will be a worker who will deliver for the wage paid him far greater service than the worker who does not possess these qualities,—and to that more valuable worker we can, consequently, pay a higher wage.

At the Curtis Publishing Company we have felt that this purpose can best be served through a centralized employment department, under a manager reporting directly to the general manager of the company—a department composed of four divisions, as follows: first, the employment division, which assumes the task of selecting and engaging the help; second, the medical division, whose function, of course, is to see to the physical health of the employes; third, the instruction division, through which the employes are given the opportunity to increase their special ability and training; fourth, the welfare division, whose purpose is to create a favorable mental background for the workers. Let us consider these four divisions in order.

Employment Division

It is the duty of the manager of the employment division to keep in touch with the sources of labor supply and engage workers best qualified to fill the vacancies occurring in the organization. These vacancies are reported to it on labor requisitions received from the executives of the operating departments. When a mechanical engineer constructs a machine, he naturally exercises the greatest care as to the quality of the material he puts into it. Similarly, when a

human engineer is constantly at work building up an efficient working force, he must use the best care and discrimination in choosing the units which are to comprise it. Subsequent training is, of course, indispensable and frequently is instrumental in transforming unpromising employes into efficient workers; but the value of the training is greatly increased when it is applied to responsive material—and the result is much better.

The most fruitful source of supply is, in our experience, the file in our office in which are classified by kinds of work the application blanks filled out by individuals who have called seeking employment. Quite naturally, for every position that is open we have several applicants. Only one can be selected for the particular vacancy, but among the others are invariably several who are well qualified for consideration when other vacancies occur.

Another source of supply, if it may be called that, is that represented by our payroll. Whenever a position of any importance is to be filled, we go through our own organization first to see if there are persons we can promote to that position, rather than ignoring the good material within our organization and seeking first at the outside sources of supply.

Splendid material for stenographic and clerical work can usually be obtained from the high schools, the principals of which are naturally interested in placing their graduates. We have found it advantageous to establish a relationship of personal friendliness with the principals of several schools of this class.

Similar material of a clerical nature can often be obtained from the various typewriting agencies who, in a similar way, are interested in placing their clients.

There is, of course, a constant influx of applicants of a miscellaneous nature seeking employment with us. Among such applicants will be found hopeless derelicts, hard-luck victims, good manual laborers, good clerical help and trained college graduates who might prove valuable in executive positions. We find it well to study this material carefully. Much of it is worthless—some of it is excellent.

Naturally, the several employment bureaus of the city are always at our service, but owing to the nature of their clientele, it is inevitable that much undesirable material should pass through their doors. Too many bureaus of this kind operate in a mechanical

way, without giving the vocational guidance to which applicants are entitled. Too frequently they feel their duty is done when they give an applicant a letter of introduction to an employer—regardless of whether or not he is particularly equipped for the employer's service or whether he is accepted. Progress is being made, however, toward a better and more intelligent service on the part of these bureaus.

And, of course, a vast quantity of material is available through the classified advertising columns of the newspapers. Advertisements of this kind naturally bring a certain proportion of applicants who are hopelessly unfit, but these can be rapidly eliminated and desirable applicants retained for more complete analysis and examination. Except where immediate action is needed, the blind advertisement is more satisfactory than the advertisement which mentions the employer's name. Blind advertisements automatically eliminate much of the hopeless material and enable the manager of the employment division to exercise preliminary judgment by analyzing the letters received from the applicants.

Applicants for positions in the Curtis Publishing Company are shown into an anteroom, where those who are obviously undesirable are weeded out. Those who deserve further consideration are requested to fill out application blanks which, when complete, show their age, their previous business experience, the names of their previous employers, the length of their service and their reasons for leaving those employers, their previous salary and the salary expected, and the names of references. Each of these blanks is delivered to the manager of the employment division, who thus has a chance to analyze each applicant's previous experience before the applicant himself is shown into the manager's inner office. Then comes the interview.

Doubtless each employment manager has his own particular system of sizing up applicants. We feel there is much to be gained from Doctor Katherine Blackford's teachings, although we are not prepared to accept them simon pure yet. Psychological tests in the selection of salesmen, as they are carried on by Professor Walter Dill Scott at the Northwestern University, seem to possess much that is of value in the selection and promotion of salesmen; such concerns as Hart, Schaffner and Marx, of Chicago, we believe, rely almost entirely upon Professor Scott. We do not employ his methods principally because we have practically no occasion to engage sales-

men of this character. We feel there is much to be gained from phrenological examinations. With the most of us, however, the phrenological analysis of employes is still a science in its infancy.

Yet, most of us judge unconsciously by fundamental phrenological standards. A firm, steady eye indicates honesty and reliability and a shifty eye indicates shiftiness of character. With most of us, however, the color of the eye as yet remains of no significance. We judge by the set of the chin, the shape of the mouth, the courteous vigor of the hand-grip, the individual's address and bearing.

We judge, too, by the individual's clothes, for as a general proposition, conservation in clothes suggests a desirable mental equivalent, and shabbiness or carelessness in personal appearance indicates a certain mental carelessness that would be a liability in most positions.

For certain clerical positions such as those of stenographer, typist or auditor, the applicant is also required to undergo a test and to measure up to certain standards before he or she is referred to the executive in the operating department.

Immediately after the interview, or during it, the manager of the employment division fills out one of our analysis cards with which it is possible to mentally reconstruct the applicant at any future time, in order to consider him for any later vacancy, if he is not employed immediately. These analysis cards contain eight divisions, as follows:

Personality
Build
English
Type of Mind { Executive / Detail / Promotive / Accounting / Analytical }
Appearance
Mentality { Super alert / Alert / Average / Slow / Dull }
Initiative
Remarks

These phrases explain themselves, with the exception, possibly, of "super alert." This home-made phrase is intended to suggest

that type of mind which is *too active*—almost effervescent; a type of mind which is seldom accompanied by the stability and saneness which are requisites in most positions.

Let us assume that a certain applicant has called at our employment office, has filled out an application blank, has been interviewed by the manager of our employment division and has passed satisfactorily. The applicant is then conducted to the executive of the operating department for whom he has been procured, and is interviewed by that executive, whose decision is final. If the applicant similarly satisfies the operating executive, he is then sent back to the employment division and examined by the physician in our medical division, which is adjacent to the employment division. If our physician gives him a clean bill of health, the employe is then given the glad hand in the employment division, is told when and where to report, is given final instructions, and is made to feel as much at home as possible. He is also presented with a copy of our Book of Rules, which shortly is to be imprinted with the employe's name, as is now done at the employment department of the Dennison Manufacturing Company; Mr. Dennison explains the value of the printed name in the fact that the employe is certain to slip the book in his pocket and carry it home to read and that the value of the book to the company is enhanced tenfold as a result.

Letters of inquiry are then sent to the persons named as references by the applicant. The value of these references is moral rather than practical, as few employers will voluntarily stand in the way of an ex-employe of theirs securing employment elsewhere. For this reason, most replies are favorable in nature, and a favorable reply is not, therefore, of any significance. If, on the other hand, the responses are uniformly derogatory to the applicant, it suggests to the employment manager that perhaps a further investigation of the individual case is justified.

If the applicant should be rejected by the executive in the operating department, he is similarly sent back to the employment division, where he is either placed elsewhere in the organization or told that his application will be considered should any other vacancies arise for which he is qualified. Occasionally the judgment of the manager of the employment division and the operating executive will differ in this way; yet the employment department never makes an issue of such a case or endeavors to force an employe

upon an unwilling executive. Such an issue would not only be bound to arouse antagonism on the part of the operating executive, which in turn would be fatal to harmonious and efficient work on the part of the employment department, but it would also fail of its purpose, inasmuch as whether or not the operating executive has the legislative activity to reject an applicant recommended by the employment department, he at least has the ability to make things so unpleasant for the new employe that he would willingly resign. This touches closely the question of coöperation between the employment department and the operating departments, regarding which I shall speak in a few minutes.

I have said that the application blanks of persons who are not placed in our organization are filed in a classified file. The classifications of this file are as follows:

Boys—under sixteen
Boys—over sixteen
High grade—male
Correspondents—female
Clerks—male
Clerks—female
Bindery—male
Bindery—female
Compositors
Electricians
Fly boys
Laborers
Pressmen
Pressmen's helpers
Shippers
Truck drivers
Phonograph operators and typists
Stenographers
Telephone operators
Undesirable

So much for the engaging of help. This, however, is not the complete function of the employment division. The employment division similarly acts as a clearing-house of labor between department and department and makes impossible a condition in which one department may be laying off help while another department of the company is engaging help of the same character. It is obligatory upon the employment division also to keep as accurate a report as possible of the performance of employes and to transfer those who are misplaced to other positions for which they are better fitted by

temperament. At a recent meeting, Mr. Willits read Mr. Boyd Fisher's paper which was presented to the Employment Managers' Conference, at Minneapolis. He showed that from October, 1912 to October, 1913, the Ford Motor Company hired 54,000 men to keep an average working force of 13,000—a labor turnover of over 400 per cent. The following year the Ford Company hired only 3,000 men to maintain an average of 23,000; this is a turnover of 23 per cent. At the present time the Ford turnover is lower still. When I was there recently, I was told by officials that only three men had been discharged from the Ford plant during seven months. Their total payroll is now about 24,000. This tremendous reduction was due principally to the inauguration of the Ford profit-sharing scheme, but also in large measure to the policy adopted under Mr. Ford's direction that no man should be discharged from the company as long as it was possible to use him in any other capacity whatever. Sometimes men are shifted from job to job six or eight times and finally end up by swinging a sledge hammer or sweeping the floor—but they are retained on the payroll.

Mr. Ford incidentally has solved to some degree the problem of round pegs in square holes, and of course that is the work of every employment department—to fit the square pegs into the square holes and the round pegs into the round holes—to place each employe where he fits most perfectly. An employe who works at his job because he is fitted for it, because he enjoys it, and therefore, puts enthusiasm into his work, is worth far more to his employer than the worker who works indifferently at his job only because he is paid for it and who quits as on principle immediately on the stroke of the bell.

Medical Division

I have spoken of the medical division inasmuch as its work dove-tails somewhat with the work of the employment division. Our men's hospital is situated next to the employment division. It consists of a waiting room, an outer office, where bandages are applied and minor injuries treated by the orderlies, and the inner office, where the doctor holds his examinations. Here our physician is in attendance every afternoon. An orderly is in attendance both day and night. Our women's hospital is geographically adjacent to our welfare division, which is under a woman manager; this arrangement is, therefore, highly desirable. Two nurses are constantly in attendance at the women's hospital during the day.

The nature of the examination of new employes is as follows: eye-sight, hearing, throat, heart and lungs. The applicant is also examined closely to make sure he has no tubercular tendency. In addition, our doctor sees to it that the individual possesses the necessary physical strength and endurance for the particular work he is to assume, and of course, the new employe must be free from any impairment which might be communicated to his fellow workers.

At the present time we do not examine our employes periodically, although this is a development which may come in the future. The International Harvester Company and other similar concerns are sincere believers in the periodical examination as a preventive means of keeping their employes in good health. I have known of a number of cases in which periodical examinations of this kind would have saved a world of trouble to the employe and considerable expense to the company.

Employes who have been absent owing to illness are required to consult the company physician before returning to work. There is a natural impatience on the part of the average worker to get back on the job, and this frequently leads him to return before he has established that margin of health that makes for continuous service thereafter.

Instruction

Three good-sized rooms, well-lighted, comprise the quarters of our instruction division. Instruction is the process of training a new employe capable of delivering perhaps 10 per cent service into a trained worker capable of delivering 90 per cent service or better. Methods of training differ with different concerns. Some concerns, owing to the nature of their work, find it best to maintain schools, under salaried teachers, for this purpose. Other concerns have their instruction work done departmentally by persons designated to that task or even by foremen and fellow employes. Where the instruction work is done in this way, the employment department should be an interested party. It should either exercise direct control or a strong advisory influence.

Most of our work at the present time is done departmentally. The classes conducted under our instruction division are purely voluntary. A salaried teacher is in attendance; she has her regular schedule of lessons. Classes in Stenography and Touch Typewriting are very popular. Also, under the auspices of the

Curtis Country Club, which I shall describe later, classes are held in English, Commercial Geography, Business Mathematics, Penmanship and Spelling. Inasmuch as these classes are voluntary, it is particularly gratifying that their popularity is increasing all the time.

About 80 of the boys in our employ are under 16 years of age and are, therefore, subject to the new child labor law, which requires them to attend school eight hours a week. We have coöperated with the school authorities in Philadelphia by placing one of the rooms in the instruction division at their disposal. Here a teacher furnished by the School Board holds classes three days a week.

Our Apprentice School for compositors is rather a unique organization, conducted under the direction of the manager of our composition division, where the type is set for the Curtis publications. The school is maintained under competent instructors and here, through a course of five years, boys are developed from raw beginners into finished compositors. It is here we recruit our stock of compositors when they are needed. The compensation paid to the boys during their five-year course increases every six months.

Welfare

Now for the fourth division of the employment division, namely, the welfare division. The work of this division has direct reference to the state of mind of the employe. This division of the work is founded on the certainty that an employe who is happy and satisfied and free from anxiety and who works under favorable physical conditions will do better work and more of it than an employe who is dissatisfied, fearful of the future, and who does his work in an unfavorable physical environment. For want of a better name, this division of the work is called "welfare work," a phrase which has fallen into some disrepute in some quarters because those in charge of welfare in certain establishments have let their hearts lead them astray and because, through lack of tact and judgment, welfare work in some quarters has been permitted to be interpreted by the employes themselves as touching on altruism and charity.

Welfare work is not altruism; it is not charity. Industry is coming to regard personnel as one of the big factors to be considered

in every undertaking, and if this is so, then the work of the welfare department is an economic necessity. But this work must be conducted along economic lines, as every other department is conducted; every dollar spent on it must yield 100 cents in return. It must be thoroughly leavened with good, hard common-sense.

It is the duty of the welfare division to go after the fundamental things first. The question of wages and hours of labor are, of course, such broad subjects that all the administrative officials of the company collaborate on them. The welfare division, however, gives constant attention to matters of almost equal significance, the conditions under which the employes work—light, air, safety devices, sanitary arrangements, elevator service. It is not reasonable to expect an employe to reach his or her place of work in the establishment in the right frame of mind to tackle the day's work with willingness, if he has to pass through the gamut of dark, congested coat rooms and either climb several flights of stairs or wait his turn to get into an elevator together with a crowd of other workers, all as vexed as he. It is not reasonable to expect him to deliver as much service for the wages, if the light is dim or the air is vitiated or the safety devices inadequate. To bring the individual employe to the frame of mind where he is able to deliver efficient services, it is obvious that the employer, through the welfare division, should arrange for those physical surroundings which will breed self-respect, cheerfulness and confidence.

The architect who planned the Curtis building allowed for large windows, so that our employes secure a maximum amount of daylight. Throughout our clerical departments, indirect lighting is used, thus avoiding the harmful glare of incandescent bulbs. The air throughout our building is warmed as it is drawn through ventilators on the roof and is changed every ten minutes. The small number of industrial accidents in our manufacturing plant suggests, to a certain extent at least, that we have satisfactorily safeguarded our machinery. Our locker rooms, toilets and washrooms are, we believe, as sanitary as scientific plumbing can make them.

Restaurants are maintained, where our employes can secure their meals at minimum rates without going outside. Restaurants of this kind require no attorney to argue their worth, especially as they are largely self-supporting. Good food makes for good health, especially when served under agreeable conditions, and the lunch

hour is the time when the employes meet socially and *esprit de corps* is developed. Our restaurants cost us 17 cents per meal served. The price per meal paid by the employes approximates 13 cents. Twenty-one hundred persons are served daily, about 70 per cent of our force.

We have two rest rooms, which are placed at the disposal of the 1,100 women who are in our employ. These rooms are comfortably furnished with wicker furniture; the originals of paintings which have appeared in the Curtis publications hang on the walls. We have endeavored to create as far as possible an atmosphere of quiet and restfulness. These rooms are open to the employes during lunch hour.

In addition, we have a recreation room, where those who wish to talk and dance and engage in more active pursuits are permitted to make as much noise as they wish.

Our welfare library comprises 6,000 books, which are much in demand among our employes, men and women alike. We distribute about 100 books a day on an average. We offer unostentatiously guidance in reading—frequently we have been able by tactful suggestion to direct employes from "The Poisoned Gumdrop" type of book to something more worth while.

Two rooms are placed at the disposal of our men employes to use during the lunch hour. One is a recreation room where conversation and game playing are encouraged. The other is our men's reading room where quiet is maintained. Smoking is of course permitted in both. We find these rooms justify their expense many times over by keeping the men in the building during noon hour and keeping them away from the corner poolroom and saloon.

As a further means of creating this favorable mental background of which I have spoken, there is maintained, under the direction of our welfare division, a savings fund, in which employes may place sums varying from 25 cents to $5.00 a week. This fund ordinarily pays 9 per cent to 10 per cent interest. At the end of the year the employes may withdraw their deposits and re-deposit them in a permanent fund, which pays 5 per cent a year. We feel that there is nothing like money in the bank to create a feeling of self-respect.

In addition, we have a Mutual Benefit Association, through which, for a nominal payment, the employes derive sick benefits when they are absent owing to illness.

Under the welfare division a staff of several women is maintained to call upon the employes who are absent on account of sickness to assist them in any reasonable way and to express the company's interest in them. This work naturally requires tact and judgment, for any careless phrase interpreted by the sick employe as savoring of charity would be resented.

Here I would like to say a few words in reference to the Curtis Country Club, the central social organization of our employes. To become a member of the Curtis Country Club, a person must be an employe of the Curtis Publishing Company and must pay his dues which, incidentally, are merely nominal. The company has absolutely no hand in its management. The club is self-conducted and, to a large extent, self-maintaining. For the past few years it has occupied an old farm house near Swarthmore, but recently the company purchased a tract of land at Lawndale, just north of the city, and is now building a well-equipped clubhouse. Athletic fields and tennis courts are being laid out, a swimming pool will be part of the equipment when it is finished, traps will be installed for those who wish to wing the elusive clay pigeon. This equipment will naturally belong to the Curtis Publishing Company, which, as landlord, will lease it to the Curtis Country Club as tenant. You will notice from the relation between the Curtis Publishing Company and the Curtis Country Club that the company wishes to avoid all semblance of paternalism. This has, in fact, been our policy throughout. As far as we can see it, paternalism is injurious on every count. It tends to spoil those employes who are looking for something for nothing and offends the self-respect of others of a more independent temperament. In all these extraneous activities and, as far as possible, in the workings of the departments themselves, we endeavor to give the employe a chance to govern himself rather than to dictate what he shall or shall not do.

The Country Club is operated largely through committees, such as the sports committee, the house and grounds committee, the educational committee. Under the latter, the voluntary classes are held in the instruction division, and periodically, motion pictures

of an educational nature are displayed in the Curtis Auditorium, which the company gladly volunteers for the purpose. During the winter time, too, dances are frequently held in the Auditorium or in the Recreation Room, and during the spring and summer months, the employes are to be found in large numbers at the Country Club in the late afternoons and on Saturdays and Sundays.

Outside the city, too, near Swarthmore, the welfare division maintains a camp for its boys. Here the boys sleep in tents on army cots and eat at a central lodge where a college man counsellor and a colored cook hold forth. A good crowd of boys spend every Saturday and Sunday at camp; many stay there during their vacations. A nominal charge is made which, while it offsets only in very small part the cost of maintenance, yet give the boys the feeling that "They are paying their own way."

Marshall Field and Company of Chicago, has succeeded in developing to a large extent among their employes the feeling that somebody is interested in their individual success. At best, business is a cold proposition, especially for the clerk or workman drawing minimum pay, who is regarded too often as a piece of machinery only. It is too frequently forgotten that he is a human being, too, with human problems of his own. We have taken a leaf from the experience of Marshall Field and are now trying to develop the same feeling on the part of our employes. Within a few weeks after a new employe is placed on the payroll, therefore, he receives a personal invitation to call at the office of the welfare manager, who talks over with him or her, as the case may be, the employe's progress and advancement. It is, without question, encouraging to the individual to realize that he is not lost in the shuffle but that somebody has his eye on him.

As a matter of fact, the welfare manager, and indeed all the managers in the employment department, must be willing and ready to act as confidant to any employe who comes to discuss his problems. One of the defects in most business organizations of today is that while it is easy enough for intelligence to be transmitted from the management to the employes, it is practically impossible for the employes to present their sincere opinions to the management. Regardless of how unfounded the feeling may be, most employes believe that by voicing complaints or criticisms of any kind, they jeopardize their standing in the company and even risk their

positions; yet without just this information, it is impossible for the management intelligently to mould working conditions in such a way that they will be conducive to enthusiasm and efficiency on the part of the workers. This, as we see it, is one of the principal functions of the employment department—to act as the channel of communication between the employe and the employer and to act as spokesman for the employe in the councils of the management. All employes should be invited to feel free to come to the welfare division at any time for an informal talk.

Some concerns take positive steps to encourage the making of suggestions on the part of the employes relative to bettering the working conditions. The National Cash Register Company, for instance, distributes in prizes $1,500 each year, and Mr. Illman, their welfare manager, told me recently that it was money very well spent. As yet we have not taken any steps in this direction; it is on the lists, however, for future consideration.

I have outlined now the functions of four divisions of our employment department: namely, the employment, the medical, the instruction and the welfare. This is the machinery with which we have to work and naturally the question might be asked, how do we know when it is working well? I might suggest in answer that perhaps the truest indication of the efficiency of an employment department is, in the long run, the labor turnover figures.

We men who are here tonight may have different ways of computing labor turnover, so for consistency's sake, I will say that we interpret it as the amount of change that takes place in the working force. Worked out in figures, it represents the percentage of "hiring and firing" in a year to the average total payroll. A high labor turnover represents not only a large sum total of human suffering but a tremendous money loss to the employer. You will remember that Mr. Magnus Alexander, in speaking to this Association, said that the managers of various establishments which he had investigated estimated the cost of hiring and breaking in an employe at from $50 to $200 each. With these figures in mind, let's estimate, each to ourselves, what the cost has been to us through the number of discharges that have taken place in our several organizations owing to purely superficial reasons, such as a minor disagreement between a foreman and a worker or because someone interpreted as

insubordinate a certain independence of expression which, properly directed, might have been a direct asset to the company.

We are beginning to see the light these days. The time is passing when managers believed in the mailed-fist type of discipline and the periodic firing of employes for the avowed purpose of inspiring the others with proper fear and respect. Instead, the most callous of us are beginning to realize that fear-controlled employes deliver only a fraction of the service rendered by the employes who are inspired by enthusiasm. As Mr. Willits quoted at our last meeting, "Any mutt can fire a man," but it takes real brains to analyze that man, place him where he belongs in the organization and capitalize his abilities as an efficient worker.

The labor turnover figures are then, as I have said, a fairly accurate measure of the efficiency of the employment department, and the employment department should take steps to reduce the turnover by every means at its command. What are the methods by which this can be done? First, of course, by intelligent selection. Second, by intelligent instruction work, so that the employe will not fail to make good through inadequate preparation for his tasks. Third, by creating in him a satisfied spirit, as far as welfare work, properly conducted, can do it. Fourth, by stimulating hope of advancement throughout the organization by adopting the policy of filling vacancies from within and giving the employe the opportunity to advance to positions of greater responsibility and compensation as fast as his ability warrants it. Fifth, by reducing as far as possible the number of arbitrary and unjustified dismissals. Sixth, by working with the administrative officials of the company to standardize the rate of production, if possible, either by manufacturing for stock instead of on order or by rearranging the schedule of production in such a way that the average output and, consequently, the working force will remain uniform. Seventh, by acting as a clearing house for labor between the various operating departments, in order to prevent one department from discharging help because of slack work while another is adding to its force by placing elsewhere in the organization employes who fail to make good where first assigned. Eighth, by the preparation of comparative statements showing the labor turnover by departments and by seeing to it that the departmental executives fully understand the cost of a high turnover; as capable managers they will

naturally be anxious to reduce it. Such comparative statements are not only of value in jacking up the delinquent managers but in revealing to the employment department what parts of the company first require investigation and remedy.

Now for another function of the employment department: the strictly military form of organization is coming under the microscope and flaws are being discovered. Industry is coming to see that the executive who says "Do this" to his subordinates, and fails to help them, is not as valuable as the executive who regards it as his first duty to aid his workmen. The executive is not to command but to assist. The workers are the men who turn out the goods, and the business organization which is permeated with this spirit of coöperation between boss and worker is certain to possess a higher degree of efficiency than the business which is built along the old-time military lines.

The employment department should aid and abet the development of this spirit, both through the personal efforts of its manager and his assistants, in giving the operating foremen a broader point of view and by the adoption of departmental policies which work to that end.

This touches closely the question of discharge. The fear of peremptory discharge is often the cause of lessened efficiency on the part of the employe. Fear and enthusiasm cannot reside side by side in the same individual's mind. The theory of the old military system—that of discharging a number of workers occasionally, for the purpose of scaring the others into good behavior—fails entirely to take into consideration the fact that such a policy, while doubtless compelling sullen obedience on the part of the individual, lowers the efficiency of the force as a whole—and, of course, increases directly labor turnover.

Ultimate discharge from our company must take place through the employment department. Individual executives may discharge employes from their departments, but if vacancies exist elsewhere, the employment department may place these employes in other departments. Consequently, we interview the employes who are released. We find that employes who are leaving the company's service are more willing to speak their minds freely than those who, still being employed, feel that they endanger their interests by so doing. In this way it is frequently possible to obtain information

from the employe's point of view which is of real value in enabling the employment department and the proper departmental executive to remedy conditions which tend to impair the efficiency of the workers. It is quite natural that a comparative record of discharges by reasons and by departments should have the effect of reducing the number of employes who are discharged for superficial reasons.

In closing, let me point out that by the very nature of its field, the employment department must be a service department. It is not an operating department, but it should work hand-in-glove with the operating departments, helping them in a genuinely sincere way to increase their own efficiency, through increasing the efficiency of their employes. It should not seek credit for what it does, only results—on which in the end it must stand or fall. Many of its achievements for the improvement of the working force must be accomplished indirectly, by counsel and advice, and the credit oftentimes must go elsewhere—but that, of course, is of minor significance. If by its activity, either direct or indirect, there results permanent economic advantage to the company through the improvement of its human relations, the employment department will take its place in the organization as one of the productive departments.

THE WORK PROGRAM OF THE EMPLOYMENT MANAGERS' ASSOCIATION OF BOSTON

By Ralph G. Wells,

Secretary, Boston Employment Managers' Association.

Introductory Note. Credit for the formation of the Employment Managers' Association of Boston should be given to the Vocation Bureau of Boston. The Director, Meyer Bloomfield, had for some time believed that it was desirable to bring employment managers together to discuss the problems of their work. In 1910 an extensive investigation was inaugurated among the larger mercantile and industrial establishments in regard to vocations open to boys and young men. In this connection the Vocation Bureau came in contact with many employment managers, and found them in favor of conferences on employment subjects. Responding to this sentiment such conferences were arranged by the Bureau resulting eventually in the formation of the Association.

The Employment Managers' Association, like other similar organizations, was formed several years ago by the Vocation

Bureau which urged that the selection, training and management of employees constituted a distinct problem in commercial and industrial work, just as important and as deserving of individual attention as sales, finances or production. It is hardly within the scope of this statement to trace the transition from the days when the greater portion of our business men thought that "hiring and firing" comprised all there was to the employment problem, to the present time when this factor in the building of a successful organization is being divided and sub-divided into elements which are surprising in the importance of their effect on successful administration. It is sufficient to say that with the appreciation of the real importance of this subject those interested came to realize that progress would be made more rapidly if there were some medium through which they could exchange the results of their work and combine to study more thoroughly the question at hand. This led to the formation of a conference of employment managers from which grew the Employment Managers' Association.

For some time the Association undertook to do nothing more than to hold meetings and conferences, but of late it has been decided that the time has arrived when it should do something of more definite and practical value to the employment manager and his firm. The following outline of the work program is submitted as an indication of the activities proposed, subject of course to such changes, omissions, and additions as future developments may require. Briefly, the purposes lying behind the work planned for the future are, first, to increase the knowledge and effectiveness of those who are engaged in employment work and to provide a means whereby they can keep in touch with the latest developments of the day, and second, to emphasize the importance of "Employment Management" and to impress this upon the business world as well as upon those who are actually in the work.

These purposes are accomplished chiefly by the holding of meetings and conferences and the securing of publicity for the activities of the Association. The objects of the Association as stated in the constitution are as follows:

1. To discuss problems of employees; their training and efficiency.
2. To compare experiences which shall throw light on failures and successes in conducting the employment department.
3. To invite experts or other persons who have knowledge of the best methods

> or experiments for ascertaining the qualifications of employees, and providing for their advancement; and more particularly to study the questions connected with the most effective employment of young people.

In addition to this, any organization, to be effective, must stand ready at any time to direct its attention to the solving of problems which confront the majority of its members. There are also many services of a special nature that it is called upon to perform as an aid to the individual.

Quite properly the chief work of the Association is to study and investigate all problems relating to employees, and in order to facilitate the consideration and investigation of these questions those in which the Association is interested have been divided roughly into four groups as follows: The selection of employees, their training, their management, and special work among them. There have been organized four special committees, one for each group, to study these questions. The meetings of these committees will be conducted in the form of round table discussions and will be open to all members of the Association. By holding these meetings on successive weeks, there will be one practically every week, which may be attended by members desiring to study employment problems thoroughly and systematically. The conclusions reached by these conferences are to be made the subject of brief written reports which will be submitted to the Association at the regular meetings for such further discussion as the importance of the topic may warrant. These reports will, in the course of time, form a collection of material and information of decided value. The possibilities of results to be obtained from this plan are most attractive and promising, especially if the committee members prepare for the conferences by investigation and research work.

It is to be expected that these conferences will lead to considerable activity on the part of the organization as the discussions of the various round tables will develop the need of further research work or of definite action by the Association.

Some of the principal topics which have been suggested under each group for consideration by the different committees are as follows:

Selection of Employees

Sources of Supply; Methods of Securing Applicants; Examinations (general, mental, physical, for special positions); Standard Application Blanks; Investigation of Credentials; Relative Value of Qualifications; Choosing between Applicants; Selection of Young or Inexperienced for Training and Promotion; Value of Immigrant Labor; Value of Previous Training and Education; Necessity of Planning for Future in Choosing Employees; Keeping Track of Former Employees; Waiting List; Coöperation with Foreman, Superintendent and Heads of Departments.

Training Employees

Necessity of Immediate Preliminary Instruction; Instruction in Shop; Special Classes; Company Schools; Outside Education; Part Time Schools; Continuation or Night Schools; Technical Schools; Need of these in each Industrial and Business Community; Correspondence Schools; Training for Promotion; Coöperation with School Authorities to Secure Proper Preliminary Training; Defects in Present Educational Methods from Employers' Standpoint; Vocational Training, its Value to Employers; Danger to Employee's Health in Outside Educational Work.

Management

Advantage of Proper Surroundings and Conditions; Hygiene; Morale; Securing and Retaining Interest, Enthusiasm and Loyalty; Shop Rules; Piece Work; Accident Prevention; Advantages of Employees Organization; Transfer from one Department to Another; Promotion; Weeding out Undesirables and Inefficient; Cost of Breaking-in New Employees; Eliminating Turnover; Cost of Shutdown; Discharge.

Special Work among Employees

Health; Recreation; Rest Rooms; Thrift; Insurance; Pensions; Credit Unions; Bonus Systems; Profit-Sharing; General Advice; Living Conditions; Social Life; Vocational Aid and Advice; Help in Securing a Better or More Suitable Position.

The Association will also serve as a consultation board offering to members an opportunity to have their individual problems discussed. Under this plan a member may submit a question upon which he would like to have the opinion of other members. This problem will be presented impersonally by the presiding officer at one of the round table discussions or else submitted to the members by means of a mail questionnaire. From the resulting discussion, the member will secure the benefit of the experience and expert judgment of others. The material thus collected will be of value not only to the member asking the question but to others who may

find themselves confronted with the same problem at some future time.

In addition to the committee meetings mentioned above, the Association will hold its regular monthly dinners, at which the larger problems or special matters of current importance will be discussed as well as the committee reports. In the past the Association has been fortunate in having as speakers men prominent in various activities, but it is the present intention not to depend entirely upon outside speakers. These will be called in whenever it is thought that they have something definite to contribute to the problems in hand. As the members themselves are experts of practical experience, it seems that the largest development will result from drawing them out and securing greater individual research and investigation. In other words, it is the idea that the Association meetings shall take more the form of a conference, considering the problems which confront the members and calling in such outside expert advice as is needed from time to time, or inviting to its meetings men who may contribute new ideas to the discussion.

In connection with all of the various activities of the Association, there will arise a constant need for research work and independent investigation, and plans are being made to have this done when necessary, by the members individually if possible rather than by hiring experts.

One of the interesting features of the Boston program is the schedule of visits to the establishments of the various concerns represented. The purpose of these is to study at first hand employment methods in actual use. It has been found that it is possible to have only one of these visits a month. In order to secure more definite and uniform results from these trips, a standard program of features to be noted is being prepared. From this may develop plans for "surveys" whereby a firm may secure through the Association an employment analysis together with criticisms and recommendations for desirable changes.

In order to facilitate the exchange of information between members, there is being compiled a general card index of the methods employed in the various concerns and of the subjects or problems which have been investigated by members individually, by their firms, or by committees of the Association, so that when

information is wanted on any particular subject, this index will show immediately the available sources. As an illustration, there will be contained in this index a list of firms who maintain special training schools for their employees, so that when any other member wishes to decide whether he would secure better results by installing such a school in his own establishment, the secretary can immediately tell him whom to consult. Other divisions of this index of information will contain a list of selected books and monographs on problems of employment; lists of employment bureaus and agencies; a catalogue of educational classes and training schools available for employees. There is also under consideration the establishment of a department to keep a record of laws and state regulations which effect the members and to keep them informed of changes that are made and of new rules issued by the state boards or government authorities. The Association will issue, at frequent intervals, a bulletin containing notices of Association activities, requests for information, and suggestions as an aid to carrying forward the program outlined.

In closing this rather condensed summary of the things which the Boston Association is planning to take up, it might not be amiss to repeat the statement made at the beginning, that the Association as an organization desires to make itself of the greatest service to its members, both individually and collectively, doing whatever may seem to be of the most benefit, but concentrating its efforts upon the things of immediate importance. Further than this the Association has a duty to perform in bringing home to business men the need of their giving proper attention to employment questions, if they are to build for lasting and permanent success. Every man should realize that the prosperity of his business depends largely on his employees, their loyalty and their efficiency. These can be secured only by painstaking attention to details of employment management.

UNIVERSITY SCHOOLS OF BUSINESS AND THE TRAINING OF EMPLOYMENT EXECUTIVES[1]

By Harlow S. Person,

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It should be clearly understood that what I have to submit for your consideration cannot, in the nature of the case, be a description of what has been accomplished in university schools of business administration for the training of employment executives. Courses designed specifically as training for the employment executive function are being conducted for the first time during the present academic year. There is no experience behind us. The most we can do at the present moment is to consider what form we believe such training should take, as a result of our knowledge of the functions of the employment executive, and of the qualifications necessary for the performance of such functions.

The expression "University Schools of Business and the Training of Employment Executives" involves three elements, each of which should be clearly understood as a condition precedent to fruitful discussion. Of the concept *university schools of business* we have a common understanding and no definition is necessary. The word *training* and the words *employment executives*, however, may not mean the same thing to all of us. Some understand training with respect to a given objective to consist merely of imparting in the classroom information concerning that objective. By training I mean the whole complex of educational processes, those in the classroom and those outside the classroom, but more or less under the control of educational authorities, whose purpose is, in addition to the imparting of information, the wise selection of those who shall be trained for the specific purpose; the development of natural, temperamental and other personal characteristics; the development of capacity for independent investigation and thinking, for forming sound judgments, and for constructive imag-

[1] Read before Employment Managers' Conference, Minneapolis, January 20, 1916.

ination; and the development of a capacity for prompt adaptation to the environment in which is to be performed the service for which the training is designed. Training for the employment executive function is therefore something larger than the imparting of information concerning the work of the employment manager. Likewise with respect to the term *employment executive*. There are employment managers and employment managers. At one end of the line we find the subordinate clerk who merely hires and fires; at the other end of the line we find the employment manager who is coördinate in rank and authority with the works, the sales, and the financial managers; who is responsible for all administrative and executive work pertaining to the personnel; whose relations are with work-people as human beings rather than as a commodity; who is representative of the work-people to the management, and of the management to the work-people; who is the man of superior insight into the future of industrial human relations, and the leader and teacher who raises both parties to the industrial contract to higher conceptions of their mutual rights and obligations. It is the training of employment executives of this latter type that I propose to discuss.

The functions of an executive position determine the qualifications which may be demanded of him who is to fill it, and these qualifications determine the nature of the training for that position. Therefore our first inquiry is concerning the *functions* of the highest type of employment executive; our second inquiry is concerning the *qualifications* demanded by those functions; and our third inquiry is concerning the necessary *training* to develop those qualifications.

FUNCTIONS OF THE EMPLOYMENT EXECUTIVE

The functions of the highest type of employment executive have a wide range, from the interviewing of an applicant to administrative decisions involving the largest social problems. For our purpose I classify them as follows:

1. Those functions pertaining directly to the technical productive efficiency of the individual employee. Illustrative of these are: the selection of the right kind of employee for any of the classified "jobs" of the business; the analysis and classification of the "jobs" making up the business; the training of employees within

the plant or in coöperation with educational institutions; the establishment of records, involving the determination of what they shall contain; the routing or transfer or interchange of employees; the discipline of employees; the determination of and maintenance of proper working conditions; the establishment of wage rates which create "incentive," etc. The performance of these functions is accomplished, in some instances, through personal contact of the employment executive with the individual employee, but on the whole through an organized machinery of minor executives, and there is involved, therefore, the function of organizing and operating such machinery.

2. Those functions pertaining indirectly to the productive efficiency of the individual employee or pertaining to the rights of the employee as an economic, even though not a legal, partner in the business. Illustrative of these are: consultations, made possible by confidence, and on the initiative of the employee, concerning the personal problems of the employee; the maintenance of hospitals, nurses, physicians, dentists, etc.; the maintenance of lunch rooms, rest rooms, recreation grounds and equipment, etc.; inspiration and assistance in the organization of an employees' coöperative association for various mutual benefit activities, such as the establishment of a coöperative store, a coöperative bank, etc. The performance of these functions is accomplished, in some instances, through personal contact with the individual, but usually through contact with officers and committees of the employees' organizations.

3. Those functions pertaining to the largest administrative policies and problems of the business. The best type of employment executive is of as high rank as the works, sales, and financial executives, has as complete and independent access to the office of the president, and has as fully his confidence with regard to problems of the relation between the management and the personnel as they have with regard to the problems pertinent to their respective functions. If there is an executive board made up of the various functional managers, he is the peer of any man on that board. On that board he sits in a dual capacity: he represents on the one hand, the desires and the rights of the working force, and on the other hand, the desires and the rights of the management. He is harmonizer and adjuster. He is the specialist who studies the

problems of industrial democracy, organized labor, collective bargaining, employees' consent, and so on, and reports his investigations and conclusions, with recommendations, to that board. The performance of these functions brings him into contact with leaders of the working people, with students of social affairs, and with the highest executives in the management.

QUALIFICATIONS OF THE EMPLOYMENT EXECUTIVE

The necessary qualifications of this high but perfectly practicable type of employment executive are determined by the functions which I have enumerated. The functions are wide in range, and the abilities necessary for their successful performance are equally so. The big employment manager must be able on the one hand, to meet on equal terms of understanding and sympathy the humblest working boy or girl; he must be able on the other hand, by weight of knowledge, of logic, and of personal force, to convince the hard-headed manager or president of the desirability of fundamental and sometimes radical changes in administrative policy. The evolution of the business conscience lags behind that of the social conscience, especially with respect to the human problem, and now and then nothing short of radical change in the business conscience is able to bring it into alignment with the social conscience. I suggest the following classification of the essential qualifications of the employment executive who is strong in every phase of his work.

1. *Personality.* He must be courteous and even tempered, and never "grouchy"; he must be sympathetic with the circumstances and ideas and prejudices of working people; he must never depart from fairness and justice; he must be intuitive, for he must sense facts which are not told to him; he must be able to read human nature and judge character; he must be quick and sure in his decisions; he must be firm, of the motor type, for he is an executive, and out of motor characteristics arises executive energy.

2. *Mental Characteristics.* He must be able to search for and ascertain facts pertaining to his problems, give them proper relative valuation, and make sound conclusions. For years he will be pioneer in a field which has been but little investigated and the principles of which have not been formulated. He must be able, with respect to one problem, to pursue the methods of the inductive

scientist, and, with respect to the next problem, those of the scientist who reasons deductively. He must have a capacity for the analysis and subsequent classification of facts, for in such capacity does organizing ability have its roots. And to perform his highest functions, he must have constructive imagination, be an independent and original source of ideas, see things which are desirable and possible in the light of present tendencies, but in proof of which all the necessary data are not yet available. It is possession of constructive imagination which makes the great administrator.

3. *Information and Experience*, and a knowledge of pertinent facts derived from contact with people and situations and records. As an employer of working people he must be informed concerning the sources of supply; the various types of public and private educational institutions—general and specialized—vocational guidance agencies, employment agencies, and the degree of efficiency with which each accomplishes its aims. As the organizer of a training school within his plant, he must have judgment based on knowledge of facts concerning educational policies and methods, and concerning instruction in specific subjects. In his contact with working people, foremen, superintendents, and higher executives, he must have possession of that mass of facts which we sum up in the expression, "a knowledge of human nature." He must be informed in the science of psychology and concerning the possibilities of, and limitations to, the utilization of the psychological laboratory in selecting and classifying employees. To enable him to analyze into their elements the processes of his business and to classify them into well defined "jobs," he must have an accurate knowledge of the details of the technical processes of his business. As an organizer of men and equipment he must be well informed concerning the principles of efficient organization and management. As an administrator, inspiring the highest executive officers towards a wise policy of human relationships, he must be master of the history of the facts and ideas of industrial relationships.

These abilities demanded of the best type of employment executive—abilities of personality, intellect and knowledge—present a combination which is extraordinary. I may be accused of picturing an ideal employment executive. That I admit, for the educator who aspires to train a young man to be anything less is unworthy of his responsibilities. I may be accused of picturing

an impossible paragon. That I deny. I will admit that the employment managers whom I know to be strong in all or nearly all of these qualities can be counted on less than the fingers of one hand, but I know many executives who possess part of these qualifications to the highest degree, and each is possessed to the highest degree somewhere by someone. This analysis of functions and qualifications did not originate at my desk. At my desk I have simply classified the aggregate of functions and qualifications I have seen in many places. Training for the employment executive function should aim to develop each student with respect to each of these qualifications to the highest degree possible, in accordance with his capacity for development. Considering the various degrees of each of these qualifications which men may possess, their permutations and combinations are infinite, and consequently we shall develop in experience an infinite variety of executives. The greatest employment managers will be those who possess all of these abilities, each of the highest degree. Such men can be attracted into executive work of this kind if directors and presidents will value the function highly enough, and will offer the necessary attracting force of rank and remuneration. It is men of this highest type that education should prepare to train. Not all of those they train will achieve the highest rank, for there are human limitations to the selection of men for training, and there are unforeseen varieties of reaction of men to training. But some employment executives of genius, and many of great talent, can be produced, and a high general average of quality of product can be maintained.

THE TRAINING

It is perfectly obvious that, considering the type of employment executive we aspire to develop, the machinery of training cannot consist merely of one or two courses of three hours each for one semester, entitled The Functions of Employment Management, or The Problems of Employment Management. The machinery of training must consist of the entire educational machinery, supplemented by such educational assistance as can be afforded by business firms, employment executives' associations and vocation bureaus. We must conceive of training as afforded, not by one or two specialized courses, but by the aggregate of courses and processes of an integrated educational industry. The one or

two specialized courses serve merely to give the final bit of specialized information, to coördinate and relate to the objective the larger amount of information acquired in other courses and in experience, and to effect a final comprehension of the specific problems of the employment management function. The instructor in these specialized courses is like the assembler in the typewriter or cash register plant, who brings together into a whole, suitable for a particular service, numerous parts which have been through many preparatory, selective and fashioning processes. Behind the assembling of the parts of the cash register is the stamping, the turning, the casting of parts; behind that the selection of the raw stock and the specifications of the metallurgist; behind that the work of the bessemer or open hearth or crucible plant; behind that the blast furnace and the selection of magnetite or hematite ores, or a scientifically determined mixture of both; and interwoven throughout the entire series of processes, the analysis of the metallurgist, the rejection of defective, and the selection of suitable, materials. Likewise with respect to the machinery for training the best type of specialized executive; back of the one or two specialized professional courses is a series of selecting, preparing and conditioning courses and experiences. The specialized employment management courses—finishing processes—should have a definite relation to the entire preceding series of educational processes.

Let us turn for a moment to the classification of requirements for successful employment managership.

1. *Personal Characteristics.* These are inborn—not made by educational processes. An educational process may discover for an individual that which he has but does not know he has, or it may take that which he has and give it opportunity for exercise and development. But it cannot make a motor temperament of a sensory temperament, and *vice versa.* Therefore our system of training must involve at an early stage and at later stages mechanism for selecting and rejecting, or at least labeling, candidates for the training. This selecting or guidance mechanism must be located, part at the educational institution, part at a highly developed vocational guidance bureau, and part at a coöperating business plant. An essential part of the system of training is the analysis

and selection of material possessing the right temperamental characteristics.

2. *Mental Characteristics.* The development of abilities to observe, to relate and to value facts, to analyze and to classify, to think logically and to form sound judgments, is the particular objective of the educational processes. These abilities are, however, the result of a gradual building-up process. It takes time. It is determined by the nature of the human mind and is as deliberate as the growth of a tree. Therefore, with respect to the development of these abilities in our selected material, we must not think in terms of one year, or one course, or one stratum of our educational system. These abilities in our material are developed throughout the primary school, the secondary school, and the college, by influences in the classroom and without the classroom, cumulative in their effect with respect to mental development. They are developed by discipline in a great variety of subjects. Furthermore, while the educational system is our great instrument for developing these mental abilities, we should not fail to realize that supplementary business experience can offer much in support of the processes of the school and college, and we should enlist business firms in our work.

3. *Information.* Those parts of the system of training necessary to give the prospective employment executive the necessary equipment of information are four.

(a) The series of educational processes of the primary school, the secondary school, and the college, cumulative in their effect with respect to the imparting of information. I am not thinking merely of the three R's and similar fundamental information, but of the more complex information acquired in the study of such subjects as history, political science, sociology, theoretical and applied economics, philosophy and psychology. All such information becomes of practical use in forming judgments, to the employment executive as I have defined his functions.

(b) A group of specialized courses in business administration, of a general nature, concerned with all phases and functions of business, and not specialized with respect to the employment executive function. The employment executive does not perform an unrelated function; he must form judgments concerning the relations of his operations to other functions, of the influence of his

recommendations on other department policies. He must have accurate knowledge of business functions other than his own. At meetings of the executive board his recommendations will carry weight in proportion to the confidence he has created in other executives' minds by repeated evidence of his understanding of their duties and problems.

(c) One or two highly specialized courses, relating specifically to the functions and problems of the employment executive, imparting information about the organization and operations of employment departments in business today, analyzing and discussing their problems, and gathering up all information acquired in more general courses of the entire educational system, and reinterpreting it with respect to the new and particular point of view. All preliminary courses have served to fashion the arrow and prepare the necessary parts; these particular courses attach the feather and sharpen the point.

(d) In connection with the work of the university and of the university school of business administration, there must be organized relationship for apprenticeship opportunities with the employment department of business firms. I emphasize the word *organized.* The course of supplementary instruction in the plant must be as carefully worked out and as complete as is that in the university. The student must be taken through every phase of the department's work, and must have an experience among the working people. This supplementary apprenticeship experience will give information not to be secured in the classroom, will give information about the workability of principles formulated in the classroom, and will give a new meaning to all information acquired in the university.

The individual thus trained for employment executive work will not be a complete and experienced employment manager, ready to assume full responsibility, but he will be high grade material, ready for final training in actual service under an experienced manager.

In conclusion I wish to make my arguments complete by describing as a concrete example the course of training for the employment executive function as worked out by the Tuck School.

Imagine an educational pyramid built up of a number of strata of educational processes.

1. The first, or base stratum, consists of the primary school; and

2. The second stratum consists of the secondary school.

The function of these schools is character and mind development and the imparting of basic information. Their organization and methods are outside the range of influence of the Tuck School.

3. The third stratum is the freshman, sophomore and junior years of the college, considered *en bloc*. The function of its process is character and mind development of a higher order, and the imparting of information of a more complex nature. The Tuck School, through its entrance requirements, has two distinct influences on the student and his educational development at this stage: it prescribes certain courses of preparation, such as economics, political science and sociology: and it puts in operation a selecting machinery by the requirement for admission of a high quality of work during those years.

4. The fourth stratum is the first year of the Tuck School, equivalent to the senior year of the college. In this year all students take the same block of prescribed courses, which introduce them to the basic facts and principles of every phase of business and give them, in the method by which they are required to work, a taste of the discipline of business service. There is at this stage no specialization within the field of business.

5. The fifth stratum is the second year, or graduate year, of the Tuck School. The greater part of the instruction of this year represents more intensive study of all functions of business, and is received by all students irrespective of their respective lines of specialization. In addition, there is given opportunity for moderate specialization, which, in the case of future employment managers, is in the general subject of organization, administration and management.

6. The sixth stratum, or apex of the pyramid, is represented by a special course in employment management, and by a thesis which is the solution of a specific problem of management in a specific plant. This course comprises an intensive study of the problems of management relating to the employment and supervision of personnel, the control of working conditions, and the relation between employer and employee. Among other things

are considered the sources of supply of employees—public, trade, and commercial schools, vocation bureaus, employment agencies, etc.; classes of employees with reference to their physical, mental and temperamental qualifications for different kinds of work; classes of work with reference to their demands upon employees; methods of hiring; general supervision; training during employment; promotion and transfer; records; discharge; control of working conditions—safety, health, recreation; employees' coöperative associations; wage systems; *esprit* and good will; qualifications and functions of the employment manager; associations of employment managers.

Because the course of training is new and is being offered this year for the first time, I cannot describe any general arrangement with business firms for supplementary apprenticeship work. We cross our bridges as we come to them. Adequate provision has been made for the men now specializing in this course, and the cordial attitude of many business men towards the course when announced assures us that apprenticeship arrangements can be made for each individual student whom our selective judgment permits to specialize in this course.

You will have observed that Tuck School training for any particular service does not consist merely of one or two specialized courses, but consists of the entire series of educational processes influenced to meet our ends. The specialized courses are but the capstone of the pyramid of training. You will have observed also that the sequence is from the general to the particular, from the liberalizing to the specialized and professional.

HIRING AND FIRING: ITS ECONOMIC WASTE AND HOW TO AVOID IT[1]

By Magnus W. Alexander,

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It must be obvious beyond argument that every unnecessary dismissal of an employe must mean a definite economic waste to the employer, to the employe, and to society. It seems obvious also that the magnitude of this waste and its influence on the industrial situation is by no means clearly understood, otherwise this important phase of the management of men would have received adequate attention before now. Many managers of large businesses, to be sure, have recognized the existence of this problem and have established specialized employment departments to deal with it. They know from experience that it does not pay to hire and fire employes haphazardly; they realize that it costs money to train a new employe, even a skilled workman, in the special practices that are peculiar to a given concern, and that upon his dismissal, save on the ground of no further need, a similar expenditure must be incurred for the training of another new employe, which expenditure only good reason for the dismissal of the previous employe can justify. In only a few instances, however, have employment departments been placed in charge of men of experience and capacity who are competent to deal adequately with the many and often perplexing phases of the employment situation, while still more infrequently have these employment managers been entrusted with the equally, if not even more important duty of continuing their personal interest in the men and women while they are retained in the employment, in order that they may be assured of proper training and fair treatment and may not be discharged without good cause. Without this latter function, which he must share with the superintendent or supervising foreman in harmonious coöperation, no employment manager will

[1] An address delivered at the Twentieth Annual Convention of the National Association of Manufacturers of the United States of America, New York City, May 26, 1915.

be able to bring about a satisfactory solution of the hiring and firing problem.

In order to place this subject concretely before employers so that they may recognize more fully the importance of this phase of economical management, I have collected and analyzed various employment statistics and studied various employment conditions in an endeavor to draw the pertinent lesson and to find the obvious remedy. My observations were concerned especially with large, medium size and small metal manufacturing concerns throughout the United States. A similar investigation in factories in Austria, England, France and Germany during the summer of 1913 has proved, however, that the problem under discussion is of international scope.

Method of Investigation

The investigation endeavored first to trace the curve of engagements and discharges in the various concerns during the period of one year and then to find out and study the reasons for the discharges of employes. All data were obtained for the year 1912, which may be considered to have been an industrially normal year. The investigation covered the employment and discharge of all classes of employes at the various factories except those belonging to the commercial and engineering organizations and to the general executive staff. A record of those who had entered the service of the concerns for the first time and of those who had been working in the same place at a previous period was also obtained, for it was assumed that reëmployment would usually cause a smaller expense than the employment of entirely new people unfamiliar with the conditions prevailing at a given factory.

The figures herewith presented cover the aggregate statistics of twelve factories located in six different states, some employing only male and others employing female as well as male operatives. The great variety of mechanical manufacture in this group of factories ranges from the production of big steam engines, many forms of electrical apparatus and high-class automobiles to that of fine tools and instruments, requiring labor of the highest skill as well as that of the common kind. The smallest of these factories carries normally less than 300, the largest more than 10,000 employes on its payroll. While it would add interest and value to

this discussion to analyze separately the statistics of the various concerns in question, it would be obviously wrong to divulge individual figures which were obtained confidentially. It should be said, however, that these factories can be classed as average or even a little above the average in economical conduct and in respect to such influencing factors as availability of labor, rate of wages and controlling legislative conditions.

A word of explanation is also in order relative to the mathematics of the arguments herein presented. The rate of engagements and of separation from service should be considered separately for each week, and even for each day, in order to arrive at mathematically correct conclusions, since changes in the labor force during a year follow neither a straight line nor any well defined curve, but vary usually according to a most grotesque zigzag line. On the other hand, inasmuch as various factors in the calculation are in themselves of an assumptive character and necessarily introduce into the problem an element of uncertainty, the short-cut methods of calculation herein used will be found to give results sufficiently accurate for the purpose. It has been the aim to give conservative values to all assumptions, and these are briefly explained so that anyone with different judgment may readily substitute his assumptions and carry the calculation through on that basis. Most industrial managers, however, I feel confident, will subscribe to the premises herein stated.

In the twelve factories above alluded to, statistics show, 72.8 per cent of the employes engaged during the year had not been employed in these factories before, while 27.2 per cent had worked in the same factories during one or several previous periods. As a general proposition these percentages will be found to apply fairly well to any normal employment in the mechanical industries.

This group of factories gave employment to 37,274 employes at the beginning and 43,971 at the end of the year 1912. *The net increase in the working force as between January 1 and December 31, amounted therefore to 6,697 employes, while during the same period 42,571 people had been hired and, accordingly, 35,874 had dropped out of the employment for whatsoever reason. In other words, about six and one-third times as many people had to be engaged during the year as constituted the permanent increase of the force at the end of that period.*

Unusual Conditions of Employment

Several reasons might be given in explanation of this condition. It might be stated that the labor market in a given locality was in part responsible for the situation; it might be claimed that in a particular plant a temporary piece of work had to be done, such as the building of a structure or the digging of a foundation, for which labor in excess of the normal quota was temporarily needed, to be dispensed with again when the special work was finished. Unusual conditions of employment might have been the result of a highly fluctuating productive situation, brought about in turn by a largely varying commercial demand on the factories during the four seasons of the year. Above all else, sight must not be lost of the fact that a certain amount of separation from the service is unavoidable and must be reckoned with, such as results from death and prolonged sickness of employes and from the necessary discharge of some and the voluntary resignation of others in the working force.

The important fact, however, stands out that 42,571 people had to be engaged during the year in order to increase the working force by only 6,697.

Theoretically, only as many people ought to have been hired as were needed permanently to increase the force. Practically, certain allowances must be made in order to view the problem in its correct light. These allowances must cover:

(a) the replacement of employes who die;
(b) the replacement of employes on prolonged sick leave for whom others must be substituted temporarily;
(c) the replacement of employes who, although they had been selected for their positions with good judgment, are found to be unsuited to the work or unfit on account of personal characteristics, or who leave of their own accord because they do not find the work congenial, the climatic conditions acceptable, or who for other reasons remove from the locality;
(d) the engagement of extra employes required for short periods, either on account of a temporary piece of construction work or usually on account of the high peaks of a fluctuating production; and

(e) the recognized fact that no employment department can be run on a 100 per cent efficiency basis.

The substitution of fair numerical values for these items will indicate the probable number of necessary engagements that will have to be made in any event, even though the numerical strength of an employment is merely maintained and the now prevailing weaknesses in the employment situation are removed.

It may be assumed that among all employes annually
One per cent die;
Four per cent are sick for sufficiently long periods to necessitate their replacement temporarily or permanently;
Eight per cent withdraw from service for unforeseen or unavoidable reasons, or are discharged for justifiable causes;
Eight per cent are temporarily needed on account of normal fluctuation of production; and
Eighty per cent constitutes a readily attainable efficiency of an employment department.

These figures find their support in the following considerations:

Mortality tables give the death rate of men and women in general employment in accordance with the age of such persons. The average age of employes in the factories under consideration was therefore ascertained and found to be thirty-one and one-half years for male and twenty-three years for female employes. For these ages mortality tables place the death rate of male employes at eight and five-tenths and of female employes at seven and ninety-five hundredths in each thousand. On the other hand, the experience of several mutual benefit associations in factories, some extending over a period of ten years, revealed that about seven in every thousand members had died annually. These statistics, therefore, justify the assumption that death removes annually not more than 1 per cent of factory employes.

Number Incapacitated by Sickness and Accident

The average number of persons in every thousand who are annually incapacitated by sickness or accident from work for definite periods, cannot readily be learned from statistics, unless recourse is taken to experiences in the German Empire, and then

other factors of the situation will also have to be taken into account. Meager statistics of mutual benefit associations in factories and in particular the judgment of industrial managers and assistants must therefore serve as a basis for any assumption of this character. In this connection it must also be recognized that it is the prevailing custom in most factories to carry on sick leave for periods of many weeks and often several months those of whose sickness the management has definite knowledge, and not to replace sick employes, even temporarily, unless their absence from work should extend over a sufficiently long time to interfere seriously with the proper conduct of work. For the above reasons, then, the assumption that annually 4 per cent of the working force will have to be hired temporarily or permanently to take the places of sick employes, should liberally reflect actual conditions.

As to the number of people who are annually separated from the service for reasons other than death or prolonged sickness, no reliable figures seem to be available. In fact, the only concrete information bearing on this subject seems to be that given by the United States Civil Service Commission, according to which 8 per cent of all government employes are separated from the service annually for any reason, including that of death and sickness. While in the case of government employes replacement on account of death could again be assumed as 1 per cent, that due to prolonged sickness should be placed lower than 4 per cent and might usually not be more than 3 per cent, on account of the liberality of treatment of government employes and the lack of competitive commercial conditions in the government service. From this it would follow that the annual separation from service among government employes for other reasons than those of death and sickness might be about 4 per cent. Realizing, however, that government employment conditions are usually more favorable to stability of service than those prevailing in commercial industrial establishments, due allowance has been made for this difference by doubling the government estimate and, therefore, allowing 8 per cent for withdrawal by voluntary or involuntary resignation alone.

Effect of Production on Workers

The effect of a normally fluctuating production upon the numerical strength of the working body is difficult to estimate.

Opinions differ widely as to how far production can be fairly evenly distributed over the whole year, but the conviction is making itself felt among employers that in most businesses the prevalent erratic curve of productive requirements can be turned into a more even wave line. Several interesting evidences are already available to show the effect of well-directed effort in this field. It must, nevertheless, be admitted that certain fluctuations of production are unavoidable; to a certain extent the seasonal character of a business, and more pertinently, commercial prosperity or depression are determining and uncontrollable factors. A correct assumption is made so much the more difficult also because normal productive fluctuations will but little affect certain classes of employes, such as highly skilled mechanics and clerks, while the great body of operatives or pieceworkers will almost instantaneously feel the effect of these fluctuations. The opinion of many who were consulted seems to center around the assumption that for all employes and for a normally fluctuating production an annual temporary engagement of 8 per cent of the total number of employes would be justified.

Finally, in regard to the efficient conduct of an employment department, it should not be difficult to attain an efficiency of at least 80 per cent in this highly specialized branch of service with but a very limited staff.

Applying the factors above outlined to the problem in hand, it follows that *while theoretically only 6,697 employes should have been employed to allow for an increase of the working force by that number, the additional engagement of 13,843 persons or a total engagement of 20,540*[2] *persons would be justified to cover withdrawals by death, sickness or resignation to allow for productive fluctuations and for practical employment results and to cover the permanent increase in the force.*

[2]Replacement of initial force = 21 % of 37274 on 80 % basis of hiring efficiency	= 9785
Replacement of replacement = ½ of (21 % of 9785 on 80 % basis)	= 1285
Permanent increase of force	= 6697
Additional increase for permanent increase on 80 % basis	= 1674
Replacement of total increase = ½ of (21 % of 6697 + 1674 on 80 % basis)	= 1099
Total	= 20540

Yet the fact is that 42,571 employes were engaged where the engagement of only 20,540[3] *persons could readily be defended; 22,031 persons were, therefore, engaged above the apparently necessary requirements.*

It is obvious that a considerable sum of money must have been wasted in unnecessarily engaging so large a force of men and women. The picture herewith presented will become at once more lucid and more appealing if the figures are given monetary values.

Money Waste in Unscientific Hiring

No reliable investigation seems to have been made and published in respect to such financial valuation. Industrial managers were, therefore, interviewed in an effort to obtain from them a concensus of opinion, but they were found to be rather loath to express their views because they had not given heretofore serious thought to the question. While one manager estimated the cost of hiring and breaking in an employe at thirty dollars, the estimates of all others ranged from fifty dollars to $200 per employe. The great difference in these estimates is no doubt due to the diversity of the industries represented by these managers. Most estimates ranged between fifty dollars and $100. One machine tool builder, usually keen in following up matters of this kind when they have been called to his attention, looked into the subject with some care and stated it as his belief that the engagement of almost 1,000 persons in his plant during one year, while the permanent increase in his force amounted to less than fifty, reduced his profits by fully $150,000. His estimate, therefore, is about $150 per employe. The head of a large automobile manufacturing concern stated with equal positiveness that the engagement of a new employe would involve the expenditure of at least $100. This statement is so much the more surprising as it is well known that on account of the high wages paid in the automobile industry it should not be difficult to secure the best type of employes, both as to technical skill and general discipline, and to hold them fairly well. Still another manager who employs a great deal of female labor estimated this cost in some departments to run as high as $200 per employe, largely on account of the costliness of the material which these employes handle.

Unquestionably the skill, experience and intelligence of a

[3] Ibid.

new employe have much bearing upon the amount of money that needs to be expended for his training. Another important consideration is whether the new employe is working on expensive or low-priced machinery or with high or low-priced tools, or on expensive or cheap materials; and to a certain extent whether or not he has been employed before in the same shop and particularly on the same class of work.

With this thought in mind I subdivided the employes under investigation into five groups and studied the requirements of each group as to the quantity and quality of required instruction for new employes and the effect of the work of new employes upon the economical conduct of the business.

Instruction for New Employes

Group A comprises highly skilled mechanics who must have practiced their trade for a number of years in order to attain the required degree of all-around experience and proficiency;

Group B comprises mechanics of lesser skill and experience who can acquire an average degree of proficiency within a year or two;

Group C contains the large number of operatives usually known as pieceworkers, who without any previous skill or experience in the particular work can attain fair efficiency within a few months, somewhat depending on the character of the work;

Group D includes all unskilled productive and expense laborers who can readily be replaced in the course of a few days; and

Group E is composed of the clerical force in the shops and offices.

The distribution of the employes in these five groups was found to be as follows, assuming that 73 per cent in each group were newly hired and 27 per cent were re-hired employes:

Group	Number of employes		Total engagements		
	Initial	Increase	All	New	Re-hired
A	3,355	626	4,661	3,393	1,268
B	4,473	814	6,296	4,583	1,713
C	12,673	2,327	14,440	10,512	3,928
D	13,046	2,369	14,321	10,426	3,895
E	3,727	561	2,853	2,077	776
All	37,274	6,697	42,571	30,991	11,580

The next task is to find how many employes in each group were apparently unnecessarily hired. Approximately correct results will be obtained by employing for each group the same method of calculation as was used for finding the number of unnecessarily engaged persons in the total number of employes. In order to secure more correct figures, allowance would have to be made for the fact that while the same mortality and sickness rate and the same employment efficiency may be considered to hold in all groups, the rates of withdrawals by resignation and discharge and the effect of a normally fluctuating production will vary for each group. On the one hand, skilled employes are more steady and will give less cause for discharge than ordinary pieceworkers or expense laborers; on the other hand, all-around mechanics will be retained under normally fluctuating production, while again, pieceworkers and expense laborers will more or less immediately feel the effect of such fluctuations.

Using the shortcut method rather than entering into an extended mathematical calculation, it will be found that the apparently unnecessarily engaged 22,031 persons divide themselves as follows:

Group	Unnecessary engagements		
	All	New	Re-hired
A	2,781	2,031	750
B	3,818	2,787	1,031
C	7,388	5,393	1,995
D	7,100	5,183	1,917
E	944	689	255
All	22,031	16,083	5,948

The factors which contribute mainly to the cost of hiring and training new employes must now be analyzed. This cost may be considered to result from:

(a) clerical work in connection with the hiring process;
(b) instruction of new employes by foremen and assistants;
(c) increased wear and tear of machinery and tools by new employes;
(d) reduced rate of production during early period of employment; and
(e) increased amount of spoiled work by new employes.

No account is taken here of the reduced profits due to a reduced production, nor of the investment cost of increased equipment on account of the decreased productivity of machines on which new employes are being broken in.

The hiring expense affects all groups of labor to about the same extent. It consists of interviewing applicants, taking their records, making out their engagement cards and other necessary papers, and placing their names on the payroll books; sometimes also advertising and traveling expenses will have to be incurred. Reduced to the cost per individual, an expense of fifty cents for each employe should be a fair estimate.

Instruction Expense

The instruction expense, on the other hand, will vary largely according to the experience and skill of the new employe and the nature of his work. It will be lowest for Group D and highest for Group C employes, for the latter must be instructed most and watched longest. This expense for Group B employes will be nearly as large as that for Group C employes, not because they need as prolonged supervision, but because higher priced foremen will have to give the instruction. Considering the quantity and quality of required instruction, this expense may be assumed to be for each new employe: in Group A, seven dollars and fifty cents; in Group B, fifteen dollars; in Group C, twenty dollars; in Group D, two dollars; and in Group E, seven dollars and fifty cents.

The value of increased wear and tear of machinery and tools by new employes is difficult to estimate. It will be little, if anything, for Groups D and E employes, for whom it may be presumed to be one dollar per employe, while it may reach thousands of dollars for damage to expensive machinery used by Groups A, B and C employes. Any estimate must be a mere guess, but it may be conservative to assign ten dollars for each Groups A, B and C employe.

The loss due to reduced production is entirely dependent upon the value of the article produced and the experience and skill of the employe required for its production. It will, of course, be lowest for Group D employes, for whom it may be assumed to amount to five dollars each. It can be estimated with approximate correctness for other employes by considering their average wages

and the average loss of productivity during their initial period of employment. Figuring overhead charges as 100 per cent of the wages of Groups A and B men, 75 per cent of Groups C and D and 40 per cent of Group E men, this loss may be assumed to amount to twenty dollars for each Group A, eighteen dollars for each Group B, thirty-three dollars for each Group C, five dollars for each Group D and twenty dollars for each Group E employe.

The expense due to spoiled work will similarly vary with the value of the raw material worked upon and the labor expended in such work. It will amount to practically nothing for Groups D and E employes, and may be assumed to be ten dollars for each Group A, fifteen dollars for each Group B, and ten dollars for each Group C employe.

These cost items must be reduced materially when they are applied to re-hired employes. The cost of training old employes will, of course, be smallest when these employes are put back on exactly the same or similar work to that on which they were engaged before they left employment in the same factory. As a matter of fact, many re-hired employes are put on entirely new work, and their training will therefore involve an expenditure which will more or less approximate that needed for the training of entirely new employes. Making, however, a conservative assumption, the cost of hiring and training old employes may be placed at ten dollars for each Group A, twenty dollars for each Group B, thirty-five dollars for each Group C, five dollars for each Group D, and ten dollars for each Group E employe. The respective totals of the various cost items above outlined are shown in the following tabulation:

	New Employes						
Group	Hiring	Instruction	Wear and Tear	Reduced Production	Spoiled Work	Total	Re-Hired Employes
A	$0.50	$7.50	$10.00	$20.00	$10.00	$48.00	$10.00
B	.50	15.00	10.00	18.00	15.00	58.50	20.00
C	.50	20.00	10.00	33.00	10.00	73.50	35.00
D	.50	2.00	1.00	5.00	.....	8.50	5.00
E	.50	7.50	1.00	20.00	.....	29.00	10.00

When these values are multiplied with the number of supposedly unnecessarily engaged new and re-hired employes in each group, the result shows that *the apparently unnecessary engagement of 22,031 employes within one year in the twelve factories under in-*

vestigation involved an economic waste of $831,030. This amount will be considerably greater and may reach a million dollars if the decrease of profits due to a reduced production and the increase of expense on account of an enlarged equipment investment are taken into consideration.

The important question immediately arises: how can this economic waste be avoided in future?

Preventing Waste in Hiring

Five answers present themselves:

First, a thorough study of current employment statistics with a careful analysis of the reasons for the discharge of employes is needed in order to furnish a fact basis of local as well as general conditions on which to predicate future action;

Second, high grade men must be placed in charge of hiring departments and must be given adequate authority;

Third, proper methods must be devised for taking care of new employes, not only in respect to their technical training and work, but also in reference to their personal characteristics;

Fourth, effective systems of apprenticeship for boys and girls and of specialized training courses for adult employes must be maintained; and

Fifth, well-directed efforts should be made so to regulate commercial requirements as to secure a fairly uniform production throughout the year.

It is well known that the explanation for an employe's separation from the service, as given by the foreman, cannot always be relied upon because, when the employe leaves voluntarily he will often give an excuse rather than a reason for his resignation, while in case of his discharge by the foreman the latter's personal bias may sometimes take the place of his good judgment. Special efforts should therefore be made to get at the real cause of an employe's resignation or discharge. Such efforts may reveal, for instance, that the peculiar methods of a foreman readily discourage new employes from continuing in the service, in which case "a word to the wise" may be sufficient to alter the foreman's tactics or other measures may become necessary in order to correct an unsatisfactory condition. On the other hand, it may transpire that certain changes in the character of work or in the conditions

that surround the work must be made to attract and keep satisfactory employes.

In the light of the above statements and figures it must be obvious also that the highest grade of judgment in the hiring and discharging of employes is needed. The employment "clerk" of today will have to be replaced by the employment "superintendent" of tomorrow, not merely by changing the title and salary of the incumbent of the office, but by placing in charge of this important branch of management a man whose character, breadth of view and capacity eminently qualify him for the discharge of these duties. Second in importance to the manager of the plant should be his assistant who is entrusted with the duty of bringing into the plant the men and women who are needed for the proper performance of work, and of keeping them in the employment as contented and efficient employes.

Selecting the Right Men

While it is quite important to select the right men and women for the right places so that a square peg may be chosen for a square hole and a round peg for a round hole, it is far more important properly to take care of these men and women when they enter upon their new work. A good man can be spoiled and discouraged by wrong initial treatment, as an improperly selected man can often be made useful and contented by the right guidance and training. An understanding of human nature, and fairness and firmness in dealing with men are some of the chief requisites of the efficient superintendent of employment. A student of economics applied to industry, he must be imaginative enough to be progressive and yet sufficiently conservative not to break away from old moorings before he has found a clear course ahead. Standing between the employes and their employer, he can, if he is the right man, work to the advantage of both by being fair to both. And if he possesses tact and diplomacy he will never destroy the disciplinary authority of the foreman even though the latter is deprived of the right to discharge an employe beyond terminating at any time the latter's connection with his department. Since the superintendent of employment has brought the employe into the factory, he ought to be the one to discharge him if he should be discharged. Often he may find that the employe's unsatisfactory showing was due to his having

been placed wrongly. How much better to take this square peg out of a round hole and fit him into a vacant square hole than to discharge him and then experiment with another recruit, a supposedly square peg? Sometimes, where all blame cannot be apportioned to the employe, his first offense can be condoned and he can be placed under surroundings which will be more favorable to his useful development. Again, at times the discharge of an employe may not only be justified but such employe ought to be made to feel in no uncertain way the disgrace of his action. Even in this instance, however, a wise superintendent of employment will fire the employe in such a manner that the latter will greatly feel the sore spot without harboring at the same time hateful resentment against his employer. A friendly public opinion of a community is a great asset to an employer and particularly to a corporation; care should therefore be taken that it be not easily disturbed.

Employer's Relation to the Community

The employer can further help to develop a good relationship with his community by offering to some of the boys and girls of his own employes or of other local citizens an opportunity to prepare in his factory for a useful industrial life. It is becoming recognized again, as it was decades ago, that the employer has a peculiar duty to perform toward his employes and himself as well as the industry, by offering to train and by properly training the youth of the land who wish, or by circumstances may be obliged to choose a vocational career for a livelihood. Sometimes by his own action, sometimes in coöperation with educational institutions, but always in sympathetic support of the well-meant efforts of school authorities, he should see to it that the young men and women whom he is training become intelligent, skillful and contented workers and leaders in the constantly growing industrial army. Although to a certain extent all employers take an interest in this problem of providing an adequate supply of properly trained workers, most of them have not yet discovered that it is essentially worth their while to set aside a generous amount of their busy time and to devote appropriate effort and financial support for this work.

Finally, as to the last suggested remedy, that of a fairly evenly distributed production throughout the year, the problem looks somewhat simple although it is fraught with many difficulties that

arise from the fact that, after all, the buying public is the real master of this situation. The employer can, however, influence the public in many ways, by educational propaganda or by the offer of advantageous trade prices, to help him in his effort for a standardization of his products, so that he may be able to manufacture for stock for future need as well as for immediate delivery, and through it to maintain fairly steady work throughout the whole year. He may well share with the public and with his employes the advantages accruing to him from a wholesale production and the resulting steady work for his employes.

Along the five lines of remedy herein suggested may be found the solution of a problem which is beginning to loom large before our eyes and will look larger as international competition grows keener. In presenting the results of my investigation into the waste of hiring and firing employes, I have made no effort to paint a black picture but have merely presented the varied colors of the industrial spectrum. I have pictured what seems to be an average condition throughout the country, indicative of defects in our factory system that challenge immediate attention.

The Spirit of Loyalty

In view of certain legislative and administrative tendencies now affecting American industries it is important also to reflect that constant fluctuation in the working force of an establishment must materially increase the difficulty of maintaining among the employes a spirit of loyalty to the management, *esprit de corps*, and general contentment. Just as quicksand cannot be kneaded in the hands into a solid lump, so also will it be found difficult to take hold of an ever-changing mass of employes and transform it into a homogeneous, intelligent, contented body. Moreover, this condition will tend to nullify, to a large degree, the beneficial effects of many well-intentioned efforts of employers, such as sickness and accident insurance plans, old age pension systems, and other phases of industrial betterment work.

And last, but not least, the problem herewith presented offers an opportunity for constructive work in which employers and employes can readily be brought together for mutual benefit, for no right-thinking man, whatever his position or affiliation, can justly object to any well-directed plan which seeks to give employes

continuous work throughout the year and to enable employers to maintain steady production.

Close analysis of the men and women whom we take into our employ, effective systems under which we train them in our work, fair treatment while they are in our service, and adequate methods to insure their dismissal only for justified cause or their voluntary withdrawal with no ill-feeling toward their employer—these are essential factors in our problem of "hiring and firing" and must be our earnest concern lest we waste money in our businesses and sacrifice friendly relationship with our employes.

METHODS OF REDUCING THE LABOR TURNOVER[1]

By Boyd Fisher,

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From October, 1912, to October, 1913, the Ford Motor Company hired 54,000 men to keep an average working force of 13,000. This was over 400 per cent labor turnover. From 1913 to October, 1914, this company hired only 7,000 men to keep an average of 17,000 men. Eliminating 4,000 from the comparison, because they were taken on extra to build up the force, the company really hired only 3,000 men to keep the same 13,000. This was only 23 per cent turnover. Of course, nine months of profit-sharing was responsible for the difference, but the fact only goes to show that the turnover of labor can be reduced. The saving to the Ford Motor Company must have been at least $2,040,000, or a return of 24 per cent on the profit-sharing bonus, which was intended as an outright gift. The saving, however, was really more than that, because the retention of the steady labor force resulted in an increase of working efficiency estimated by the company at 44 per cent.

The Ford Motor Company is a special instance, and no other company can be urged to give $10,000,000 to reduce its labor turnover. Others can be urged, however, to seek other means of secur-

[1] Read before Employment Managers' Conference, Minneapolis, January 20, 1916.

ing staple working forces. In this paper, I shall state compactly all of the means I know of to accomplish this result. No expedient will be urged beyond the resources of any going concern and none will be recommended which has not worked successfully in conservative companies.

By means of some of the methods here set down the German American Button Company at Rochester, New York, reduced its turnover 40 per cent, and the Cleveland Foundry Company reduced it from 240 per cent to 125 per cent in a little over two years. I understand that the present turnover is still lower.

The causes of the mobility of labor may be classified under three headings:

a. Men are fired.
b. Men are laid off.
c. Men quit voluntarily.

I shall strip the subject of emotion and avoid literary embellishment, treating the causes and remedies for labor turnover in accordance with a rigid outline. The men for whom this paper is intended need no analysis of the direct cost or indirect results of ruthless hiring and firing. They merely want other men's experience in dealing with the problem.

The first cause of the too hasty discharge of workmen is ignorance on the part of the foremen and even pseudo-employment managers of the great cost of such a policy. One so-called employment manager in Detroit boasted last year of having so much work to do and done by this department that he personally examined in a year over 300,000 applicants for work. He didn't know how many he had hired but he "guessed it was a whole lot."[2] If any one desires a close analysis of the actual cost of such a policy let him read Magnus Alexander's paper *Hiring and Firing* or W. A. Grieves' paper *Handling Men.* The first paper may be had from the General Electric Company at West Lynn, Mass., and the second from the Executives' Club of Detroit. Mr. Alexander gives the cost as high in some cases as $200 per man hired. Mr. Grieves places the minimum at $40. Deere and Company thinks that it costs $1,000 to break in a new foreman; that must mean "barring accidents."

[2] Obviously the man exaggerated, but the exaggeration only shows that he failed to see the scandal of the situation, and confirms the impression of great instability of labor forces.

Even where the cost is realized, however, usually no adequate record is kept. Until Mr. Charles H. Winslow of the Society for the Promotion of Industrial Education brought his inspiration to Detroit as an investigator for the Bureau of Labor Statistics, I think that not more than two factories were keeping a proper tabulation of employment statistics, and I hope that Mr. Winslow does not challenge me to name the companies. He found, of course, that most employment managers were keeping card records from which tabulations could be made, but that they were so busy hiring new men that they couldn't get around to analyzing past performances. When he persuaded them to dig into the old records, they were all shocked at the discoveries.

Ignorance of cost and of extent of turnover may be set down as fundamental or precedent causes. Assuming that these have been removed, we may then ask, why are men fired?

In the first place, blame the shop foremen. It is easy to do this and "get away with it" because of the great responsibility laid upon them already. Consider what most shops require of these men.

They set speeds and feeds and depth of cut, decide on the best angles and shapes of tools, the best cooling agents, the kind of steel to use. They are expected to set piece rates, plan to keep all machines busy, but not congested, to order work through the department in relative importance, keep data on idle equipment time, break in new men, adjust differences as to wages, keep up discipline, keep down rejections and act as stock chasers.[3]

If they must do all of these things and must furthermore hire men, is it any wonder that they find it necessary to keep picking goats upon whom to put their own errors, or that from sheer weariness and irritation they fire a man a minute? Most foremen have too much to do, and in order to square themselves they try to get men who need no managing. That is the chief cause of the turnover of labor. I know of one superintendent who took a foremen to task for not firing more men, because it seemed to show a lack of discipline. And to date they haven't been much checked up in this tendency.

A second reason for hasty, ill-warranted firing is to be found in the fact that religious or national prejudice in a department or

[3] See Knoeppel, *Installing Efficiency Methods*, p. 13.

in the mind of the foreman himself "jobs" many a fair workman out of his job.

Passing this obvious cause, we must admit that most men are fired with some justice in the excuse that they are unfit. A business acquaintance once said that of any ten jobs probably only one was filled by the man who ought to be in it, and that of any ten men probably only one was doing the work for which he was best fitted. Lack of knowledge while hiring and lack of insight after hiring on the part of the representatives of the management are responsible for the improper assignment of men hired. Those who examine applicants have no specifications for the men wanted and little skill in getting at the qualifications of those examined. Few plants yet have searching ability tests supplemented by physical examinations to assist them in getting the right man in the right place Still fewer plants have any means of training the men once hired into greater efficiency in their assigned tasks. These causes account for the lack of fitness in men; and where they exist foremen cannot be blamed for rejecting after a short try-out most of the material sent to them.

The foregoing causes account, I think, for all of the causes of outright discharge. There are two reasons, in addition, why good men are laid off, usually permanently.

In the first place, unless the plant is scientifically managed, and most plants are not, the scheduling of work through the shop is faulty. Some departments will be congested, or at least some machines, while others will be idle. Through lack of proper information, foremen overstate their labor requirements with the result that they get through some operations ahead of schedule and some men must be laid off; for, obviously, a Jones and Lamson screw machine hand or a die maker can't be kept around the place as an ornament; and what foreman has the time to try to fit men to new specialties? If the foremen have underestimated their labor requirements the result will soon be the same. Extra men must be called in only to be discharged later on. Even though a good man will be needed next week he is laid off as soon as he is through, because foremen are expected to keep down direct labor cost. One Detroit employment manager told me that his foremen were astonished when he analyzed their labor requisitions, showing them how frequently they discharged and then wildly besought men on high

priced operations. Of course, lack of a centralized scheduling system was mainly responsible.

Men are laid off chiefly, however, because of the dull seasons that afflict every business. Even the Cleveland Foundry Company which I have cited for its good employment methods, is handicapped by from 20 to 40 per cent seasonal reductions annually, and the stove companies of Detroit frequently close down altogether for periods which let many men get away. Mr. Winslow has some good analyses of seasonal fluctuations in several industries and cities. We shall return to this topic presently.

It now remains only to brief the reasons why men leave their jobs voluntarily. Low wages and long hours account for many cases. Inequalities in the pay system, however, account for more, because men can more easily perceive injustices in their own departments than in their remuneration as compared with that of men in other plants. Trade unions oppose wage payment in proportion to individual efficiency, but that doesn't blind a good man to the fact that he is worth more than a poor man. Straight day wages or poorly set piece and bonus rates are responsible for many rankling injustices.

The worst injustice of all is the failure to reward men for increased efficiency over their previous ability. One employment manager discovered a workman who had been on the same rate of pay for five years. He is now seeing to it that men in his company are periodically advanced or promoted in accordance with their efficiency records, regardless of whether they ask for increases in basic rates or not.

Men quit, too, because foremen or fellow workmen of different races or religions "gang" them, and, unless the management inquires into the reasons for men's leaving, this cause can never be run down. I tremble to think of how many good men have been run out of plants, because of differences over the present war in Europe.

Workmen, too, are often ignorant, narrow, highly sensitive to trivial wrongs or fancied oppression by "capital." Many nurse grievances until they goad themselves into committing "job-suicide." The lack of any well understood means of redressing wrongs, or even of hearing them, is a very large influence in voluntary quitting.

Of course, the wrongs may be very real, and in themselves they may be cited as a cause. For instance, bad plant conditions, such as poor lighting and ventilation, insanitary toilets and work places, lack of proper lunch room or street car facilities all have their effects upon the turnover of labor. Insanitary toilets alone were given as a reason for a recent strike; and many workmen will quit their jobs in preference to going blind at an ill-lit machine.

The above completes the list of causes of turnover under the three headings of discharges, lay-offs and resignations. The remedies urged will reach all of these conditions, but it is not feasible to deal with a specific remedy for each separate cause, but, rather, to group them under the following main headings:

a. A central employment department.
b. Physical examinations.
c. Industrial education.
d. Regularized production.

To cut down the turnover a centralized employment department managed by a man with gumption is the prime necessity. Unless this can be arranged none of the specific remedies can be attempted. It is almost begging the question to say that the employment manager must have gumption. He should really have the vision of a prime minister and the resource of a member of the General Army Staff in war-time; but, as things stand, we can afford to compromise on gumption.

Given a central employment department, with some one to stand at the window so that the employment manager can at least occasionally visit the plant for which he is hiring men, we may hopefully confide to it the specific remedies for the turnover of labor.

First of these, is a set of written specifications in accordance with which men are to be hired. E. G. Allen of Cass Technical High School, Detroit, a member of this conference, is the first man to have classified and printed the minimum standards of knowledge required to operate the different classes of machines. Beyond that there should be written specifications for each operation, with a short description of each. Mr. Winslow, in carrying out the Richmond Survey wrote up such specifications for printing, machine, tobacco and other trades. The Republic Metalware Company in Buffalo, has such a book of specifications. The German Ameri-

can Button Company in Rochester is among other companies which have them. Nearly every member of the Executives' Club Employment Managers' Association of Detroit is making up such specifications. The purpose of such data is pretty obvious. The employment manager cannot be expected to know every operation for which he hires, and with such material in hand he can more intelligently question applicants. Increased rejections at the employment gate reduce the number of discharges at the pay window.

With the wisest selection of men in the world some firing will be necessary, and the employment department should next prepare so to record and tabulate turnover that justifiable causes may be sifted out from the unjustifiable. It is useless merely to keep card records of each man's work-history. If the data isn't periodically taken off the cards and analyzed it is a useless expense to record it. The record of men leaving should be tabulated so that it shows up comparatively by weeks and months, by departments responsible and by causes assigned. A wall chart designed to show these figures, such as the Saxon Motor Company of Detroit has designed, will be of great assistance in localizing the blame for exceptional turnover. The analysis can with great profit be further extended by classifying the number of skilled, semi-skilled and unskilled men leaving the plant every week. The analysis by departments will help show this.

Even if foremen haven't the authority to fire men, they do have the power to make them quit voluntarily, and a detailed analysis will show what foremen have the most trouble with their men, and why.

It may be given as a separate remedy that foremen should no more have authority to fire than to hire. The manifold responsibilities of foremen already listed in this paper, manifestly unfits them to be fair judges of the amount and kind of discipline required, or to inquire how inefficient men may be trained or fitted into new tasks. Foremen should, therefore, have authority only to recommend for discharge, or to demand transfers of unsatisfactory employees. At the Ford Motor Company, the Packard Motor Car Company, and Dodge Brothers, the foremen can go no further than this, and it is rapidly becoming true of all Detroit companies.

A great assistance to employment managers who are asked by foremen to discharge employees will be found in a monthly or

other periodic certification by foremen of the character of work performed by each employee in their departments. Later, if they ask to have a man laid off and the employment manager can show the foreman's own signature to a certificate of the man's satisfactory work, it greatly strengthens the employment supervisor's hand when he decides to retain the man.

Where the localization of the discharge power in one department helps particularly is in the case where faulty scheduling would throw out good men for lack of further work. Foremen would not compare notes; they would simply fire. The employment manager, however, can look over the day's requisitions for labor, and send the superfluous worker to some other department.

A further advantage of a central employment department is found in the ability under proper management of that office to keep a record of the individual efficiency of workmen, of lates and absences, and of other matters which are involved in turnover. Low efficiencies can be tabulated and plant teachers can help to bring unsatisfactory workers up to the mark before the foreman would spot them for discharge. Usually the cause will be found to be some grievance or other condition, which, if not detected through an efficiency record, would not be discovered until too late to prevent an employee's leaving.

Finally, no employee should be allowed to quit the plant until he has disclosed his reason for being dissatisfied. Companies in Detroit which have this rule make it effective by requiring the employment manager's signature before the employee may be paid off. If the office knows why men leave it may not be able to persuade them to stay, but it can prevent the next one's going.

So much for the central employment office. We might very well group the other classes of remedies under this heading, because the employment manager properly has his part in putting them into effect; but they can be undertaken without his assistance.

Physical examinations have two effects in reducing turnover. In the first place, it rejects the weak, the ruptured, the sufferers from defective sight and hearing who would later need to be discharged as unfit. Again, by indicating the character of work which can be safely performed by the partly defective applicants it fits them into the jobs in which they can make good. Thus, there will be fewer voluntary quittances by virtue of the work's being "too

hard." I could cite examples to prove the value of these considerations but they really prove themselves in the statement. The Cleveland Foundry Company finds it profitable to pay a high salary to a competent physician for full time and give him three months' leave for hospital practice to keep him from going stale. The Workmen's Compensation Law is having its influence in addition to the above two arguments in bringing most Detroit factories to the idea of physical examinations.

Industrial education, even more important than any of the foregoing methods of reducing turnover, may nevertheless be treated briefly. Every argument that can be cited in favor of industrial training is an argument for the reduction of the turnover of labor, because the object is, of course, to fit men for their jobs so thoroughly that they will gladly stay in them.

Education helps to reassign men to the work for which they are best fitted. Education is examination. It discloses to the pupil as well as to the teacher wherein lies his special aptitude. The great evil of faulty assignment will be largely overcome by systematic instruction in tasks and in operations.

It will, furthermore, make the inefficient men fit. The Timken-Detroit Axle Company has actually had poor mechanics develop into high grade foremen or master mechanics through the part-time continuation work of Cass Technical High School. Many times, Detroit factories have saved men slated for discharge by encouraging night school or continuation school attendance.

Industrial training, particularly through shop schools, such as the excellent ones maintained by the Cadillac Motor Car Company, Packard Motor Car Company, Dodge Brothers and Northway Motor & Manufacturing Company in Detroit, and Brown and Sharpe in Providence, will train men already in the plant for new openings, thus avoiding the necessity of hiring new, outside men for them. It is valuable to fill up the gaps from men already familiar with the style and product of the given plant. The Employment Managers' Association of Detroit has reached the deliberate conclusion that in times of industrial expansion it is useless to try to hire men away from other companies; that they must rely upon their own shop courses for instruction in particular operations, and upon the public technical schools for instruction in the fundamentals of shop mechanics. Any other recourse will simply load up the

payrolls with incompetents who will live through their little hour of discord and destruction in the plant only to be discharged as unfit.

The fundamental remedies for turnover are quite beyond the authority of the employment manager. This is true of industrial education. It is more acutely true of the regularization of production. Only the general manager and the board of directors can undertake to stabilize the labor force by stabilizing production throughout the year. And even where they see the value of this they must discover a solution which is individual not only for each industry but even for each plant. On this account it is worth while only to enumerate some of the solutions that others have hit upon.

The Ford Motor Company standardizes its product to such an extent that if you have to buy a Ford car you might as well do it, as you go to the dentists', whenever you get up the courage. The Fords you have with you always and they never look any different. The Paige-Detroit and the Studebaker companies bring out models at irregular seasons, instead of bunching their business around the time of the Auto Shows.

The Joseph & Feiss Company, garment manufacturers of Cleveland, and the H. H. Franklin Company, of Syracuse, underproduce their demand in the busiest season. It takes intelligence plus courage to do that, and yet the economies of plant and labor force are demonstrable. Furthermore, the Joseph & Feiss Company leaves off its advertising campaign in the busiest season, and the H. H. Franklin Company pays a higher sales bonus in the dull season.

Some companies fill out production in the dull season by stocking up on staple lines or standard, low-cost parts. A button manufacturer in Northern New York, after scientific study of his sales, so managed this stocking up process on best selling lines that for thirteen years he never discharged an employee for lack of work. For thirteen years, a button manufacturer, dependent upon the most seasonal of businesses, the clothing trade, never discharged an employee for lack of work! It is worthy of additional mention that this company thinks it economical sometimes to sell slightly below cost, in order to keep its constant labor force.

It is the Franklin Company again, under the brilliant management of Geo. D. Babcock, which manages to keep its seasonal

fluctuations within 30 per cent, by manufacturing during dull seasons, those parts of its motor car which are standard or cheap enough to provide continual employment without tying up excessive amounts of capital.

With the best of management, of course, some lay-offs may come through bad business. Even then it is possible to mitigate the effect by lending money to permanent employees laid off for prolonged periods. The Detroit stove companies do this regularly, and when, a year ago, 82,000 men were out of work at one time in Detroit, the manufacturers here organized a huge relief bureau as part of the Board of Commerce which kept a thousand families on charity, got three thousand men permanent jobs, and several thousand men temporary places, and placed 15,000 more back to work sooner than usual, and persuaded the factories to retain many thousands more on part time. This care, I think, was what enabled Detroit to react most promptly to the sudden turn of business last spring, and proved to be the underlying basis of Detroit's present amazing prosperity.

The remedies for labor turnover which we may classify under the square deal policies that prevent men's leaving are too numerous to be taken up in this paper. They have to do with higher wages, shorter hours, discriminating systems of recording and pay, and improved plant conditions. There is no last word in the effort to better the conditions of the workers. A plant must simply keep up with the procession. Any plant can do that much. It would be unwise to urge the refinements of welfare management without expounding the methods by which employers can make the profits to undertake them. That, of course, would take one out of the legitimate range of this paper. But as Miss Ida Tarbell said in an address to the Detroit Board of Commerce, "You cannot stand permanently in the way of legitimate human aspirations."

It is not only profitable for employers to yield to the legitimate human aspirations, but it is perhaps even a duty for them to lead men to aspire. Mr. Henry Ford has done that, and where is the employer this side of the Styx whose conscience has not been quickened by Mr. Ford's example?

EMPLOYMENT PROBLEMS AND HOW THE JOHN B. STETSON COMPANY MEETS THEM

By Milton D. Gehris,

Paymaster.

We have all had some experience with employment problems and we know that it is easier to secure employes than it is to hold them. Only a small percentage of men seem to appreciate steady work and there are so many contributing causes that are factors in making employment unsteady. Working conditions, rate of wages, disposition of foremen, personal ambition of employes and a hundred other influences are all vital factors in this ceaseless shifting of employment.

Mr. Stetson was always very intensely interested in his employes and tried to keep in personal touch with his men. When the place was small he could call every man and boy by name and he would go through the shop and speak a word of appreciation when their work warranted recognition, or he would tell them where they might improve. He always contended that a married man was a better workman, as a rule, than a single man and to this end commended those who married and established homes. He interested himself so far as to give a dollar to every baby born to an employe. As the organization grew, nearly all the experiments he tried, to hold his people, grew from an opportunity to be helpful. The opportunity came as a need and he took advantage of the need.

The fact that Mr. Stetson encouraged marriage and the establishment of homes led to the organization of the John B. Stetson building and loan association thirty-six years ago. His plan was to allot five or ten shares of stock to worthy employes, he paying the dues as long as the employe remained in his employ. The employe was allowed to use these shares to borrow on them to purchase a home. In this way men could buy almost as cheap as they could rent. Over four hundred have acquired homes in this manner. The company today has 750 employes who have been allotted building and loan stock and 3,974 shares are paid for by the company for the benefit of its employes. Almost as many as

the above have become individual stockholders and invest their savings in this way.

About the same time that the building and loan association was started Mr. Stetson organized a Sunday School for the employes and the people of the neighborhood of the factory. He set aside a room for this purpose and the work has grown and prospered until today the company conducts the John B. Stetson Mission Sunday School, a strictly non-sectarian school with an average attendance of about nine hundred weekly. In connection with the Sunday School there is conducted a great social work looking after the moral and spiritual uplift of the community. Organizations caring for the poor, work among the boys and girls, associations for the promotion of athletic sports and many other helpful influences are all a part of this social work.

A noonday religious service is conducted every Tuesday from 12:30 to 1 o'clock. Prominent ministers or laymen of the city address these gatherings and the employes are free to attend or go to their work as they prefer.

The saving fund grew from a Christmas club started by a few of the office employes. When Christmas came they decided they did not want the money thus saved and asked the treasurer of the company to invest it for them. This fund now has deposits of over a hundred thousand dollars on which the company allows them 5 per cent interest. While this is a losing proposition to the company it fosters saving and is encouraged in every possible way.

Life insurance is used as a means to tie a number of the older employes and make their interests a part of the organization. The company pays the premium and the families are the beneficiaries.

The most definite plan to hold the people was started in 1897. The plans mentioned heretofore were applicable only to week workers and did not affect the piece workers of whom we have quite an army and who were hard to hold. In 1897 only 35 per cent of our hat sizers worked steadily during the entire year. They were a roving class working in one shop for a while and then going to another shop. Mr. Stetson offered a bonus of 5 per cent on all the sizers earned during the fiscal year, if they remained in the employ of the company from Christmas to Christmas, the bonus to be paid them at the Christmas exercises the day before Christmas. The

result was 50 per cent of the men working steadily during the entire year. The next year the bonus was made 10 per cent and 67 per cent of the men remained the entire year. In 1901 the bonus was raised to 15 per cent and 88 per cent of the men remained. In 1903 the bonus rate was made 20 per cent and since that time practically 100 per cent of the men work the entire year.

The plan proved so helpful with the sizers that it was applied also to the hat trimmers where it had the same effect of making them more regular in their employment. The girls of the soft hat trimming department now receive 10 per cent bonus and the girls of the stiff hat trimming department 20 per cent. Four years ago a 5 per cent bonus was granted to all expert workmen and this last year that bonus was extended to every employe of the factory who worked steadily the entire year, with the exception of the clerical help and the janitors who were given a cash amount. The bonus period ends the thirty-first day of October, but the bonus is not paid until the day before Christmas. If an employe leaves any time between the end of the fiscal year and Christmas he forfeits his bonus. If he leaves after Christmas he again forfeits what has accumulated from the first of November on to the time of leaving.

Several years ago we had a number of union men working for us and as there was demand for union labor in union shops they were ordered to leave us and report for work in union shops. They protested on account of their bonus and were allowed to stay until after they received their year's bonus at Christmas time. Nearly all these men have returned since, but not as union men. They saw to it that they would not again be in that same position where they could be ordered away and thus forfeit their bonus.

You may ask what the men do with their bonus money. A number of them are buying homes and pay the amount they receive into the building and loan association on account. Some put the money into the saving fund. We have found very few cases where the money was wasted. The men have established homes and take pride in furnishing same and living in more comfort and refinement.

The Stetson beneficial association grew from a demand to be helpful to the employes during sickness and at time of death. Every employe must belong to the association. They pay 25 cents

a month dues and the original plan was to pay three or four 25-cent assessments yearly for death benefits. This entitles the employe to $5 per week benefits for five weeks after the first week of sickness, and to one hundred dollars death benefits. We find that from eight to nine 25-cent assessments are sufficient to pay for both sick and death benefits now. This shows that the sanitary systems introduced into the factory, the filtered water supply, the wholesome lunch arrangements and the general care for the health of the people has been the means of reducing the sick rate at least $33\frac{1}{3}$ per cent.

The Stetson hospital was founded through the visits of a specialist who treated Mr. Stetson. Being a busy man, he had a specialist come to the office to treat him for catarrh. He found a number of the employes suffering with the same malady and decided to set aside a corner in the office where the men could be treated. This was the beginning, the Stetson hospital is the result.

Thirteen years ago the company increased its capital stock and the board of directors set aside 5,000 shares of stock (par value $100) to be used by the president to reward faithful employes and to make them co-partners in the business. A number of these shares have been allotted to worthy employes in lots varying from 3 to 50 shares. The stock does not cost the employe one penny. It is paid for from the dividends accumulating and while it is being paid for the employe may draw 5 per cent dividend yearly. After it is full paid the employe receives the dividend in full which is 25 per cent at this time, but he does not receive possession of the stock for a period of fifteen years. The stock is held in trust for the employe and by an agreement whereby, if he leaves or is discharged for cause, he forfeits the stock and receives only the amount of par value paid in. If an employe dies or is incapacitated so he cannot work, then the stock is transferred to him or his estate. After the fifteen years of trusteeship are over the stock becomes the employe's property absolutely. The stock forfeited reverts back to the trustees to be reissued to some other employe. This plan has done much to hold the people. Since the market value of the stock is about $400 and par only $100 the men feel they have too much at stake to throw away all that equity and they become part and partner in the concern. Up to the present time 796 employes

have been allotted stock. What has this meant? The following figures show very clearly what it has meant to us:

Men Employed by Us

20 years and over	324
15 years and not 20	230
10 years and not 15	663
7 years and not 10	857
5 years and not 7	854
3 years and not 5	607
2 years and not 3	462
1 year and not 2	262
Total	4,259

It must be remembered that while we now employ about 4,400 people twenty years ago we only employed about 600 and more than half of these are still in our employ.

Three years ago we added the physical examination feature. Every applicant, before he is given employment, must undergo a physical examination. We give the applicant a card to a doctor at the Stetson hospital. The doctor examines the applicant and sends his report to the employment department. If the result of the examination is favorable, the applicant is sent for and given work, if not favorable the report is filed and the applicant does not hear anything further about it. The doctor's report for the year ending October 31, 1915, shows the following result:—Three hundred and eleven applicants were examined, of whom 78 were rejected. Seventy had defective vision of whom 22 were corrected by glasses. Of the numbers rejected, 4 were in the advanced stages of consumption, 10 in the incipient stages of consumption, 21 had a family history that was extremely bad and would have made them bad risks, 5 were rejected for deformity, 3 for blood pressure, 1 for syphilis, and 12 for lice. One of the surprising features of the examination is brought out by the number of applicants who are lousy.

Our beneficial report for the year shows that of a total of 4,400 employes only 520 applied for benefits and 85 per cent of these were away for only two weeks; 45 had the grippe, 56 bronchitis, 61 rheumatism, 16 gastritis and 4 typhoid fever. The company uses every effort and spares no expense to conserve the

health of the employes and with the bonus plan and the employes as stockholders we are like a big family with interests that are mutual. If the employes have any grievance they can feel free to talk with their foreman or the management at any time and are welcome to do so. Differences and difficulties, if any arise, are always settled in this way.

THE ESTABLISHMENT OF PERMANENT CONTACTS WITH THE SOURCES OF LABOR SUPPLY

By John S. Keir,

Department of Industry, University of Pennsylvania.

A well-known scientist is reported to have faced a certain problem, and after looking over the field to have simply said, "Gosh." When one approaches a study of the organization of the sources of labor supply one feels very much the same way.

The scientific consideration of the human element in the carrying on of big business is a practically new departure. But it has come to be recognized that, all other elements aside, excessive hiring and firing is an economic loss, a loss in which both the employer and the employe are vitally affected.

It is recognized that when we speak in the language of the dollar sign, we speak a tongue that is common to all.

One of the first factors entering into the cutting down of labor turnover, is the securing of proper employes. In many plants functionalized employment departments have been established to "handle" each employe to the mutual benefit of the man and of the firm: they examine each applicant; they determine his particular fitness for one position or another; and, after the man has been hired, they keep in touch with his work through data furnished by foremen and other sources. Other plants, in place of a department, simply appoint a man who is responsible for hiring such men as, in his judgment, will prove valuable to the organization. These employment officials go under a host of titles and are really little more than employment clerks.

Both the employment departments and the employment clerks, it will be noticed, throw almost the entire emphasis on the work *after* the worker comes into the plant. Of course, the chief emphasis should be in this direction. But for our particular discussion the question presents itself, "Is it not possible to go even one step further back?" What of the workmen, unknown and unsought, who pass a firm's doors endlessly and fruitlessly? In that stream are high-grade men the firm wants; new blood suited to its needs; and perhaps indispensable in the long run. How is the firm to know this and recognize the man? How are the men to recognize their rightful destination; or, knowing, what sign can they hold up for the employer? The employer must make the first move. Before he can stop or dam up the stream of workmen, he must follow it to its sources—the sources from which the supply of labor emanates. Having the sources of the labor supply intelligently lined up, the employer can, at least, point the way by which some organizing and improving of these sources may be brought about. He is the most vitally concerned; he must bear the responsibility of the problem.

It must not be supposed that the field has been entirely barren of effort. Perhaps the first step—and a most important and productive one—has been the coöperation with the various schools and colleges.

Certain types of industry require men with technical training. Some concerns have turned to the technical schools and colleges to supply this demand and have established with them close and permanent relationships. One of the best examples of this is the General Electric Company of Schenectady. This company has 73 colleges on its list, and 8 foreign institutions, to which it goes for picked men. To supplement the theoretical knowledge of the college class room, the company provides for a student engineer's course. During the past 12 years 3,450 student engineers have entered the works at Schenectady, Pittsfield and Lynn. The number of men engaged annually varies between 200 and 400, depending upon industrial conditions. To enter this course a man must have a technical college training or its equivalent, and of course, the proper endorsement of the college authorities and other personal recommendations.

If cases of this sort were the only kind, then the man without

a technical training would be decidedly handicapped. However, the Western Electric offers a like opportunity to the untrained man. Aside from engineering, the work of the company is divided into two general groups, namely: manufacturing and commercial. Each year a representative of the company goes the rounds of the colleges, describes the opportunities offered by the company, and, of the men that come to him, endeavors to pick those whom he judges best fitted. Another firm which has started the ball rolling in the right direction is the Otis Elevator Company. It yearly selects and takes on a number of college men for training.

In order to secure desirable men for positions in the Far East, the Standard Oil Company has adopted a training system. College men are generally chosen for this work, but any American between the ages of 18 and 21 is eligible. Various phases of the oil business are taught and trips are taken to several of the company's plants. Men are dropped from time to time if they fail to meet the requirements as laid down by the company. If the student passes the course successfully, he is given further training in the foreign field at the beginning of his work. Thus the company is able to have constantly at hand a body of picked men. Other companies, not so widely known, perhaps, have followed essentially this same plan. The Rand Company of North Tonawanda, N. Y., is one. The Bamburger Department Store of Newark, N. J., is an example of a concern, other than a manufacturing plant, that is making a special effort to reach back to the ultimate sources of supply so that it will be in a position to make the best choice of men.

In order to fill the need of men who cannot afford to go to college, extension courses are offered in some of the larger cities, by Columbia, the Wharton School of the University of Pennsylvania, and others. These extension courses generally exist with the coöperation of employers, and indeed, depend on that coöperation. As an illustration of the regard in which employers hold the extension school, the story is told of a barber who worked in one of the hotels; and attended the evening classes. Among his patrons were men well up in the industrial and commercial world. Soon after it was known that he was taking the extension course, he was offered a job by one of these men; a position much superior to the one he was then occupying. Thus, such coöperative activi-

ties not only improve the sources of supply but also single out the man worthy of promotion.

Working along this same line, we find evening schools conducted by colleges and Christian Associations. These, too, as a general rule, receive the hearty support of employers.

One of the most successful fields for the organization of a labor source has been found in the high schools. Thus the Curtis Publishing Company of Philadelphia, through its employment department, aims to keep in personal touch with the principals of all the schools in the city. The company, as far as possible, tries to acquaint the various school heads with the type of girl or boy it requires. When a position opens, it is a relatively simple matter to call up the principal of one of the schools and obtain a suitable person for the job.

In some cases the school systems are largely moulded by the industries or industry of the town. Such a case exists in South Manchester, Connecticut, where the Cheney Silk Mills are located. The Cheney mills found that employes who were graduates from schools in Manchester had not been well trained or thoroughly grounded in some of the fundamentals of education. Accordingly the mills made an offer to the town authorities, that, provided the town kept up its appropriation, they would contribute enough more to bring the schools up to standard. This offer was accepted by the town authorities and they follow, to a large extent, suggestions laid down by the mills.

In this connection, perhaps the bulk of the work has been done by the department stores. Strawbridge and Clothier of Philadelphia, for instance, have an arrangement with the William Penn High School of that city, whereby a number of girls, during vacation time of each year, act as part of the selling force of the store. The Dennison Manufacturing Company, in order to train girls for work in its office, each summer provides employment for a number of high school students. These girls are given positions, whether there is any particular need for them or not. The company feels that the results justify the expense to which it is put. Possibly the most extensive work has been done in Boston under the auspices of Simmons College and the Women's Educational and Industrial Union. By coöperation with such concerns as the following: Jordan Marsh Co., Gilchrist Co., Shepard Co., Wm.

Filene Sons Co., R. H. White Co., E. T. Slattery Co., there has been established a School of Salesmanship. The students are selected from the regular selling force, and must be approved by the store superintendent and the director of the schools. Girls who have had a high school training are preferred. Tuition is free and students attend the school without reduction of wages. The course occupies three hours each day, and is extended for three months. Courses in salesmanship, important features of textiles, color and design, economics, arithmetic, personal hygiene, English and merchandise, aim to teach, as part of the purpose of the course, "right thinking towards the work as a profession and to arouse a feeling of responsibility and interest." The work is supplemented by practical talks by a store representative. Similar courses in salesmanship are open, also, to the students in nine of the Boston High Schools. These, too, coöperate with the stores. Many of the girls work in the stores on Saturday, or even on Monday if their school record be good enough to warrant the absence.

Simmons College and the Union also offer a year's course for teachers of salesmanship and related subjects. This is fundamental, because in a great many places where the coöperation of stores and industrial plants with the schools might be brought about, there is not a sufficient supply of teachers for the schools. By teachers, we mean teachers with the proper training. A high official of one of our largest manufacturing concerns made the statement not long ago, that work in their instruction schools is more or less handicapped by the fact that it is almost impossible to find teachers who can instruct the classes in the subjects with which the company desires particularly to have them conversant.

There is still another way in which the schools and manufacturers may coöperate. The Cass Technical High School of Detroit has worked out a series of specifications for particular jobs. If a man wants to be a machinist he follows out one set of specifications. If he wants to be an electrician he is trained after a different formula. This particular school was among the first in this field, and has perhaps done more than almost any other in helping to bring about some specific training for certain jobs, before the candidate enters upon his service.

This sort of organization is not confined entirely to high school students. A great many children never get beyond the grades.

In order to enable the members of this group to carry their studies further, a system of continuation schools has been started. Continuation schools may be of two kinds: (a) compulsory, (b) voluntary. The former may or may not be of assistance to any one manufacturer, except in the general improvement due to better education. Almost every state now requires that working boys and girls between the ages of 14 and 16, be allowed to attend school, during business hours, a certain number of hours each week. In a school of this kind, there is a constant demand for teachers who are able to give courses dealing with the practical side of life, along with the fundamentals.

Voluntary continuation schools are chiefly of the part time variety. In some instances colleges and high schools, by coöperation with manufacturers, arrange to have their students spend part of each day doing actual practical work in the factory. The report of the Committee on School Inquiry, City of New York, gives a very comprehensive statement of this coöperative plan as it exists in the New York high schools. The University of Cincinnati applies this same plan to its men of university grade.

Perhaps the real voluntary continuation schools are those carried on within the factory. Some of these have already been mentioned in passing. Another instance is the J. G. Brill Company of Philadelphia, which established such a school just a year ago.

The problem of vocational education is one on which, at the present time, a great deal of stress is being laid. One of the most extensive studies in this direction which has been carried on has been made in Richmond, Virginia. This city has made a study of the several trades, printing, building, plumbing, metal trades, etc., and has made, in coöperation with employers, suggestions in regard to the kind of education which is suited to the needs of each case. It recognizes that the bulk of the work must be done either in part time or evening schools, in order to reach the majority of the workers. It recommends that these schools be of two types: (a) of the general order, (b) of the industrial order. It is worth while to stop and point out specifically some of the lines of training in the latter group. For the *moulders*, for instance, the following courses are recommended: (a) Shop mathematics; (b) Properties and composition of irons and alloys, with special reference to furnace

fixtures; (c) Outlines of history of iron making; (d) First aid for burns and care of health in foundry conditions.

For machinists: (a) Shop mathematics, with special reference to calculation of working speeds, feeds and measuring instruments; (b) Mechanical drawing with special reference to machine parts; (c) Elements of mechanism; (d) Properties of metals with special reference to high and low carbon steels; (e) Designs of jigs and shop appliances; (f) Theory and practice of cutting tools; (g) Construction of various specialized machine tools.

Nor was this study entirely confined to trades in which men predominate. With the exception of offices and department stores, the white girls in Richmond are employed in manufacturing and mechanical pursuits. These operations can in the main be more quickly and satisfactorily learned in the factory than in the school, largely because the school lacks trade information. The *Survey* does not believe that a trade school is the answer to this. It recommends that courses, aimed to train in the practical arts, be added to the general education of girls over 13 years of age. This training is to begin in prevocational courses in the upper courses in the upper grades of elementary schools. In making this recommendation the *Survey* recognizes it is without precedent, but it is simply used to meet Richmond conditions.

A similar survey to that carried on in Richmond was made in Minneapolis, Minnesota. Both of these instances simply illustrate the general movement toward a more efficient lining up of workers for various specific trades and occupations through the coöperation of employers with educators and other public officials.

While the schools of various sorts are the largest single factor by which this particular phase of the employment problem has been met, they are by no means the entire story.

Next in order for consideration are the employment bureaus. These are of two kinds, namely: public and private. Of the latter type little need be said. Some are good, some bad—mostly the latter.

Public bureaus have been in existence since 1892. At first they served as a labor market, a place where the employer could make known his wants, and where the employe might find a job. In the course of time, because the bureaus have served in a large measure only the unskilled laborer, people have come to look upon

them as public clearing houses for that sort of worker. But gradually this attitude has been changed. The bureau which has probably done most to effect this alteration is located in Cleveland. This bureau has attracted equally the employer of the skilled and unskilled operator, the day laborer and the college graduate. This is so unusual that it is worth while to consider the plan of the Cleveland bureau more at length. Briefly stated it is as follows:

(1) By taking over all the scattered employment bureaus maintained by Y. M. C. A.'s, etc., the labor market is centralized. The finances of the bureau are maintained by the state, the city and by private funds.

(2) To centralize a community of interest. This is brought about by coöperation of the employer, labor organization and others particularly interested.

(3) To investigate both the employers and the applicants. This work has been particularly effective in cases where girls were to be employed.

(4) To follow up the applicants that are placed for the period of one year. This tends to make the bureau pick, through its experience, a round peg for a round hole. It also makes the successful candidate work harder on the job.

The advantages of a bureau such as this are: (a) it commands the confidence of both the person to be employed and the employer; and (b) by thus combining the efforts of all, a great deal of unemployment with its accompanying economic waste may be cut down; (c) a lot of preliminary interviewing may be saved the employment manager. So successful has been the work of this office, that in the girls' and women's bureau alone, of the 38,849 people who applied, 15,392 received jobs, and some 19,000 were referred to positions. The work showed an increase of 45 per cent over the previous years. Thus the employment departments in Cleveland have a dependable source of supply on which they can call at any time. It is to be regretted that Cleveland stands almost alone in this respect.

Still another factor which operates toward a dependable labor supply is the employers' relations with one another. The Employment Managers' Association in Boston has demonstrated the value of these associations in regard to one particular subject. This group has agreed that since through their connection with each

other they see over the whole field, the right position shall have the right man irrespective of his present firm. That is, a firm may have an able man whose advancement is obstructed by the man ahead; if an advantageous position opens with another concern his employer sees that the man gets the better job. This works to the advantage of both the man who hires and the man who is to be hired. The former gets a good man, and the latter is no longer dependent upon the decease of the man ahead for his promotion. On first view, this is an excellent scheme, but its efficacy is questioned by many business men. Few firms are willing to let a good man go, even for his own advantage, when his departure will be a loss to the concern involved. But at least, the idea betokens a healthy change in a city where the employes of department stores were once threatened with discharge if they even talked with a representative of another store.

All the methods which we have so far discussed, have been more or less indirect. One firm has tried the very direct method of canvassing the territory adjacent to its plant, in order to be assured of a steady source of labor. Instances of this practise thoroughly carried out are rare.

But schools, employment bureaus and the rest deal with workers who are coming in from the outside. Is there not a source of labor supply to be organized within your own organization? The answer is obviously, "Yes."

In any plant, the friends of the people who are working in the plant form an ever-present supply. Some concerns indeed rely on this almost entirely. The Dennison Manufacturing Company, for instance, gets its information about a man to be employed, not so much from his former employer, as from employes within its own plant who are friends of the applicant.

There is this to be said. We are all conversant with the old adage anent to birds of a feather. If by better selection and better training, we are able to get better employes, shall we not through the operation of the tendency discussed above, be able to gradually raise our entire force to a higher level? That is, if selection and training improve the type, almost automatically the source from which the type is drawn will improve.

Within the organization itself, promotions and transfers often unearth a man whose light had been hid under a bushel. Mr.

Reilly of the Dennison Manufacturing Company in another section of this issue has shown what his company has done in this respect.

The Western Electric Company, which has already been mentioned, aims to promote men from its own ranks as far as possible. When a vacancy occurs, the man next in line is first considered for the position. This has resulted in the filling of many important positions with comparatively young men, but the company has been sufficiently successful under their direction to warrant confidence in this policy.

In the problem of employment management, one or two concerns have stood out prominently as laying stress on the human factor. The reputation for this has gone abroad, and these concerns find that very reputation a means of having always on hand the type of operatives they most desire. Thus the Feiss Company of Cleveland experiences no difficulty, at the present time, in getting all the workers of the sort it wants. Hart, Shaffner and Marx of Chicago are in the same position. The people who are going to apply for work know beforehand what the company expects of them, and what, in turn, the company will do for them. A great many are mechanically eliminated without the necessity of even going to the factory. Of those who do apply at the factory and get positions, the majority seem to stick, as witness the small labor turnover.

The work of the labor unions along this line of endeavor has been practically negligible. It is an angle of approach which, for some reason or other, seems to have been entirely omitted.

A widely known professor in one of our larger universities once made the statement that he was always glad to see a member of the teaching staff go. That no matter who he was, the stimulus which a new man brought into the organization, more than offset the effects of the first man's leaving. Possibly this overstates the case, but everyone recognizes that new blood is of value to any organization. Let us not carry a good thing too far and overstabilize our working forces. But by organizing the source of labor supply, it is hoped that the value of new blood will be infinitely enhanced. But as regards the problem in general, so far we have merely ruffled the surface.

PUBLIC EMPLOYMENT BUREAUS AND THEIR RELATION TO MANAGERS OF EMPLOYMENT IN INDUSTRY

By Hilda Muhlhauser,

Director, Girls' & Women's Bureau, State-City Labor Exchange, Cleveland.

For many years, indeed since 1892, public employment bureaus have sprung into existence to provide a clearing house for the employer and the unemployed—a labor market where the employer could make known his demands and the seekers after work could make known their abilities. As time has gone on, the public employment bureaus have come to serve almost entirely the common labor market, so that the American public today looks upon these bureaus as a clearing house, not for all the laboring classes, but for that portion whose work is entirely of a physical nature. Gradually, however, the standard once set by public employment bureaus is being raised; even as these bureaus are ceasing to be located in basements and are being placed on the ground floors, so are they now compelling the industrial world to realize that they do stand on the ground floor in this modern cycle of industrial unrest and overwhelming unemployment. Of the public employment bureaus in America (not including private employment bureaus), only one has undertaken the tremendous task of raising the entire standard of public employment bureaus so as to meet the need of the managers of employment in industry. I refer to the Cleveland office which not only is a center for the laborer and the employer demanding skilled and unskilled labor, but is also a magnet that draws to it the college graduate, the specialized men and women who never before dreamed of using a public employment office. A vocational guidance department, a recreation and also an immigration department, mark this Cleveland office as unique among the public employment bureaus in the country, and the Cleveland idea is but a beginning in the vast plan that shall eventually make the public employment bureau the great tool at the command of the managers of employment in industry.

The Cleveland plan briefly stated is this: First, to centralize the labor market by taking over all the employment departments of separate organizations, such as the Young Women's Christian Association, the settlements and institutions. Included in this group of independent organizations was the Vocational Guidance Bureau, the forerunner of the present Girls' & Women's Bureau, which, as a private organization maintained by private funds, was consolidated with the women's department of the State-City Labor Exchange. As a result of this combination the Girls' & Women's Bureau of Cleveland began to carry on in a vital and effective way its centralized work. Financial support was secured from both the state of Ohio and the city of Cleveland. In spite of the fact that both their budgets were reduced to comply with their platform of economy, the state and city granted initial funds this year to carry on our work. The Bureau, therefore, is financed by city, state, and private funds.

After an investigation of private employment agencies was made, we found that many of these agencies were not only misrepresenting the positions they offered, but were actually sending girls to houses of ill-repute. Although the private agencies fought us through the courts, a city ordinance was adopted on February 15, 1915, regulating private employment agencies. As a result of this ordinance, thirteen of the thirty-five agencies failed to comply with the regulations and disbanded.

Our next step was to centralize community interest, to secure the coöperation of employers, labor organizations and interested individuals. In order that our Bureau obtain as broad a view of conditions as possible our advisory board, which met monthly, was composed of representatives of labor and capital and local organizations such as social settlements and the chamber of commerce, the retail merchants' board and the federation of labor. The vital problems involved in the placing of girls and women were discussed and many ideas of immediate practical value often had their birth at these meetings. For instance, at the time of the garment strike we decided that our position as a public employment bureau was not to side with either the manufacturers or the strikers, but to avoid sending girls to those factories involved without first telling them the exact conditions prevailing. Our fair attitude on this question won for us the approval of both sides.

It was always our policy to investigate employers' calls, and our survey of Cleveland industries, carefully and thoroughly made, enabled us to do intelligent placing. We secured all information concerning hours, wages, sanitary conditions, busy seasons and opportunities for advancement. We faithfully live up to our slogan: "Never send a girl to an uninvestigated place." Thus, through personal investigation, we are able to save the girl from the possibility of exploitation.

Not only do we investigate employers but also all applicants for work. Our corps of investigators includes a group of twenty-five trained workers, many of whom volunteer their services.[1] We secured the industrial and home record of all girls. We went even further, and secured the coöperation of school teachers who sent to us those children who intended to leave school. Our vocational guidance department often prevailed upon these young folks to stay in school, and in many instances, when financial stress prevented them from continuing their education, we provided scholarships through a fund established by the Federation of Women's Clubs.

Our follow-up work, finding out what becomes of those applicants we place, is continuously done for one year after they enter industry.

The result of our complete records was an understanding of each applicant, which, while unobtainable by employers, was absolutely invaluable to them. For instance, if an employment manager, for some economic reason or as a matter of preference, wished to secure girls who were living at home, there was no avenue through which he could obtain such girls other than our Bureau. Thus progressive employment managers came to realize that one way of reducing the labor turnover of girls and women was by having a personal interest in them as well as by securing in return the vital active interest of the employe in her work. To this end the employers found the Girls' & Women's Bureau an essential factor for the efficiency of their own business, and in one month 17,000 calls for girls and women were received. In time, perhaps,

[1] The class in Sociology of Western Reserve University also give volunteer service to the Girls' & Women's Bureau under the supervision of the director. They do special investigating and receive credit in their college course for this work.

all employment managers will come to realize the value of using public employment bureaus. Think of the time wasted by employment managers in interviewing the applicants, many altogether unqualified, who flock in large numbers in response to newspaper advertisements or help-wanted bulletins. Consider, too, from an economic standpoint the saving it would be to employers to forego the large item of expense involved in advertising by utilizing a Bureau such as ours, conducted in a fair and intelligent manner.

Why is it necessary thus to build and create ideal public employment bureaus; why is it important in this modern day of advertising with all the many avenues for reaching and securing labor, why should the public employment bureaus be *the* central exchange where labor and capital shall meet and bargain? First of all, because the public employment bureau commands the confidence of the workingman and woman which the private bureau and, in most cases, the employment managers themselves have failed to gain. Just as a mother trustingly sends her child to public school because she has faith in the state, just as men send representatives to Congress having faith in the nation, so does labor send her children of modern industry trustingly to the public employment bureau knowing they have but to knock and they will be admitted to the house of opportunity.

Secondly, that great waste which every year in normal times constitutes over 3,000,000 able-bodied men out of work at least three months of the year, that great economic waste, can at least partially be stemmed by the joint efforts of all the public employment bureaus. At the first conference on employment held in San Francisco August 2, called by Hon. W. B. Wilson, United States Secretary of Labor, the nucleus of a plan was drawn whereby all city, state and federal bureaus, all public employment bureaus, shall be linked together in one unending chain of opportunity for the unemployed. A committee of twelve was appointed representing the city, state and federal groups which shall work out plans in detail for carrying out this great nation-wide idea; the central thought being to bring the man and the job together, not only in one state, but in every state; to bring the supply of labor

to that place where there is a demand; to transfer the oversupply of labor to those localities where it can be utilized.[2]

With such concentrated and widespread effort as this city-state-federal plan involves, the managers must realize that the public employment bureaus are a force and power in the labor market of the country, and, knowing this, cannot afford to ignore them in the vast employment departments in industry. Everyone is crying out in protest against the wasteful labor turnover, employers and managers are seeking some solution to this drag on the wheels of modern industry.

I firmly believe, and others who have given the matter a great deal of thought agree with me, that if the managers of employment in industry and the leaders of city-state-federal employment bureaus would get together, the cylinder through which this waste flows unstemmed would have a bottom and a top to check the shifting labor conditions. The public employment bureaus being the bottom would stop the leakage caused by the inability of the employe to find the place for which he is best fitted. The employment managers would be the top, conserving the best ability which they have thus secured, so as to keep it from flowing out only to be turned over and over.

True it is that seasonal occupations are a factor in contributing to the cause of unemployment. But if we would give the question our best thought, even this great obstacle might be partially removed. If a man picks cotton in the southern cotton fields for a short season only, why not send him, when that work is completed, to the place where he can do other work of a similar nature? And

[2] Committee members—Chairman, Ethelbert Stewart, chief statistician of the United States Bureau of Labor Statistics; Secretary, Miss Hilda Muhlhauser, Director Girls' & Women's Bureau, State-City Labor Exchange, Cleveland; C. L. Green, U. S. Department Labor, Inspector in charge employment and distribution, U. S. Barge Office, New York City; Dr. P. L. Prentis, Inspector in charge U. S. Immigration Service, Chicago; Henry M. White, U. S. Commissioner Immigration, Seattle; Charles B. Barnes, Director Bureau of Employment, 381 Fourth Ave., New York City; Justin F. Denechaud, Secretary, State Board of Immigration, New Orleans; Luke McCoy, Secretary, Illinois Bureau of Labor Statistics, Springfield, Ill.; Edward W. Olson, State Labor Commissioner, Olympia, Washington; H. J. Beckerle, Superintendent, public employment bureau, Milwaukee, Wis.; Harry Donoho, Superintendent, municipal free employment bureau, Los Angeles, Cal.; G. Harry Dunderdale, Superintendent, city employment bureau, Boston, Mass.

if 5,000 miners are out of work in Pennsylvania due to lack of mining there, why not send them to Ohio or West Virginia where there is a demand? The United States Secretary of Labor hopes to have a bill put through Congress making it possible for the railroads to grant reduced rates to such men and also to women, who are leaving one place to find work in another under city, state or federal guidance. This will be a great common denominator in the labor equation.

The employment managers in industry should utilize this vital force and coöperate in carrying out this plan. Of course there may be danger places, the question of unions and other organizations will arise, but only by the combined efforts of employment managers, railroad magnates, labor unions and city-state-federal employment bureaus, can any scheme for the distribution of labor be successful. Just as a small employment bureau, if it be successful, invites the coöperation of all elements concerned or effected, so must this larger plan of distribution when launched, be manned by a crew of sturdy thinkers and workers on the wild tossing sea of industrial competition and labor unrest.

The managers of employment in industry cannot possibly solve the question alone, the government cannot solve it alone, the laborer cannot solve it alone, capital cannot solve it alone, even with commerce and opportunity by its side, but the moulding together of all these elements in the great melting pot of coöperation, stirred by the master resource, shall in the end produce the well-balanced figures of labor and capital hand in hand on the heights of the world, with their child satisfaction peacefully following after them.

WRITTEN SPECIFICATIONS FOR HIRING

By R. J. Burke,
Detroit Steel Products Co.

The essential function and purpose of written specifications for hiring is to define and describe man and job and their mutual relation, so as to afford a working basis of common agreement and understanding among the directly interested personnel of the organization.

Written specifications for hiring are largely a product and result of modern scientific management. The spirit and program of this form of management is best evidenced by the writings and practical work of Emerson, Taylor, Gilbreth, etc. In substance their aim and ideal is to standardize, functionalize and generally organize plant, equipment, personnel, etc., to best practicable advantage. Mr. Harrington Emerson defines efficiency as the right thing, done in the right manner, by the right man, at the right place and in the right time. It is quite manifest that Mr. Emerson has built his whole definition around and on the personal element. The right thing, the right manner, the right place, the right time are "right" by virtue of being predetermined, recorded standards and it logically follows, therefore, that the "right man" must be so by accepted definition and description.

In purchasing materials a certain quantity and quality is secured for a certain price and the material is usually bought because best adapted for its particular, intended use. Specifications are drawn up giving exact kind, sizes, dimensions, etc., as required by intended use and for given money.

In purchasing labor, does not the same relation between commodity, service, and price hold true? Labor should be purchased solely because the individual man has attributes, qualities and degree of fitness that make him an efficient selection for the particular job at an economical price.

The employer, whose motive for being in business is generally to make a profit, does not want to pay for any more or less ability than he can use, and as a good business man should not. His

specific work calls for certain essential qualifications and he wants the best that the market affords at a price. Therefore the value from the business man's point of view of having written specifications which outline what the job is and is not, and describe what the individual should be and need not be, is obvious. If these specifications were scientifically drawn up and followed closely and intelligently in the selection of help the result would be to fit the right man in the right job at the right price. This would then seem to be a fundamental method and remedy to reduce the labor turnover. Also, of assuring to the employer that he is getting and paying for his labor on a basis of set service and performance, and if, as a result of such happy selection, each man found more joy in his work and pride in its performance, it would be a large step toward industrial idealism.

It is desirable that the specifications be written by one person, who should have good power of synthesis and analysis, a philosophic, judicial mind, and of course the literary ability to give in so many words an accurate, reliable and adequate description and definition.

If the plant or organization to be dealt with in this way has not already an organization chart or tree one should first be drawn up. This should show the structure of the business by divisions, sections and departments and list the special classes and kinds of work within each so that a title may be given each operation or "job" for which somebody is usually hired. As, "power press hands," or, if it is thought advisable to attempt a finer and more elaborate division,—power press A, power press B, etc.

Following is a representative list of such titles used to cover all jobs in one of the press departments of a large metal ware business:

1 Foreman.
1 Solderer.
1 Die setter.
2 Power press "A."
3 Power press "B."
1 Power press "C."
2 Bench hands.
3 Foot press hands.

When the various jobs have been classified by title or designation in each department and the one who is to write the specifica-

tions has obtained at least a fair acquaintance with the general nature, organization and aspects of the business the following method of attack is suggested.

First, select some particular department and after ascertaining from competent authority its general kind of work and relation to the other departments, spend some time watching the employes at work, observe their motions, efforts, habits, system. *What they do and how they do it.* Talk with several employes and get their idea and description of their respective jobs, as well as of the department as a whole. It is also a good plan to get the opinions and ideas of persons not directly engaged in any work in that department but who in the course of business come more or less in contact with some phase of its activities.

Note the physical surroundings and general conditions. Make copious notes.

The next step is to analyze the various jobs from the point of what they do and *why* they do it. Then having satisfied ourself of what is necessary and essential, a rough definition may be drawn. This should cover in general a description of the particular job and what would seem to be required by way of specific person to fill the job,—the physical, intellectual and character essentials. When completed this should be submitted for the opinion of those engaged, directly or indirectly, in the work. More often than not several changes will be found necessary because *reading* the description as a whole, often points out misstatements and inadequacies to the man in the shop whose mind is not always organized to fully and exactly express himself in conversation.

It is a chief consideration to be well borne in mind that each specification, before being adopted, should have as full and sincere *understanding* and *approval* of those who are to have authority over the person described, as can be had by a practical accommodation of the various ideas and opinions into one single definition. This allows for all the advantages that accure from a spirit of common council and makes for the successful use of the specifications.

It is also a good plan to make express statement of what the employe need not be so as to check, if possible, the petty notions and prejudices of some and make clear the intentions of the management. This would cover politics, religion, race, nationality, etc.

To those interested in work of this kind, I would suggest that they read Dr. Blackford's book, *The Job, The Man, The Boss*, and especially Hugo Munsterburg's *Psychology and Industrial Efficiency*. The point of view of both is interesting and should be of considerable help to anyone engaged in the writing of specifications for hiring.

Following are a few sample specifications of a foreman, a press hand, and a factory planner, respectively.

Foreman
Department X—Section X

Ideal: all Foremen

Dependable, willing competent man who can strike best practicable adjustment between the factors of maximum production, minimum time, most efficient motion, least effort, best quality and promote "Spirit of the Hive" by reciprocity, coöperation and mutuality.

Storekeeper Department 233
Department X—Section X

Storekeeper: Ideal, See Department No. 15, "Foreman"

Has charge and immediate supervision of all raw stock used in works. He receives same from cars and disposes of it as requisitioned. A practical familiarity with tin plate, sheet and band iron, wire, rivets, etc., is, therefore, essential, that he may be able to measure, gauge and identify general quality and grade of same. He must be intelligent enough to read and write, understand and appreciate the purpose and function of such clerical forms as requisitions, manifests, etc., used in shipment of ware from plate mill to machine he delivers same to, and have a good command of the ordinary arithmetic operations, reading and writing. He should have a good visual memory, a regard for the systematic arrangement and efficient location of his material, and a close knowledge of same.

As a foreman he must be able to direct and "get the work out of" a gang of common, ordinary laborers. To some extent he must have the gruff personality to command the respect, get the enthusiasm and confidence of men of this class, and type. He should be patient and even-tempered enough to be constantly "bothered" for material and readjustment, etc., and yet ready to

serve the production end at every opportunity; must speak English, and Polish, if possible; must have absolute integrity and honesty.

Power Press "A"
Department X

Power Press "A":

Should have had experience on small press and bench machines or work similar—to acquire knack, carefulness and speed rather than any special skill. Physically such operatives should have considerable endurance and stamina for the work is in itself machine-like, and 90 per cent of it is done on the feet. Height about 5 feet 2 inches to 5 feet 5 inches, with weight proportionate—sturdy physique and from 17 to 19 years of age. Good muscular coördination and of such order of intelligence as is satisfied and inclined to reduce its work to terms of continuous, single-grooved habit.

As a natural corollary it is obvious, therefore, that an over-responsive, overkeyed, nervous organization would be dangerous, on account of accidents, and would also make the work disagreeable, and hence, not a "good job" from employe's standpoint. To make for a permanent force, other things being equal, it is very essential that the intelligence be not overactive or imaginative, and that the employe be such as would consider himself acquiring nothing beyond his expected stipend and the knowledge of running that kind of machine.

As a general proposition he must be plastic enough to fit into the spirit as required above by definition of a foreman and, therefore, not "fresh or a smart Aleck."

Factory Planner
Department X

Factory Planner:

Might be defined as a factory clerk, experienced and familiar with the general ware, its special kinds, sizes and classification by item and having an appreciation of the general process and sequence of manufacture, seasonal variations, shop practicalities, sufficient to program a miscellaneous volume of work with most efficient net result. He must be able to tactfully obtain, organize and put into effective motion the active coöperation of each foreman and therefore, have adequate, reliable and immediate knowl-

edge, records and aides (as an order and progress clerk), so that he can further and, possibly, check the quality and extent of the foreman's coöperation. The progress file and schedule-of-work record run by the planner on orders pending, in process and available is in large measure arranged and built on the accepted promises of the foremen in consultation with the planner, and is adapted as closely as circumstances permit to the demands of the general storekeeper, hence, good power of analysis and synthesis, ability to form a safe average judgment, tactful persistence and a retentive memory are essential qualifications of the planner.

The ideal planner would have a thorough appreciation of the full possibilities of men (*i.e.*, labor); equipment (machines); supervisory forces and responsibility and be able to strike the best practicable adjustment between the desired volume of production, various elements of time, promises given and accepted, departmental and factory coördination, and obtain maximum production and quality in minimum time and cost, with least effort and waste to the various factors of production.

As an organization the planning office might be likened to a clearing house and in its most undeveloped state as simply a place of clerical record, for immediate and reliable reference of the superintendent, of orders pending, in process and available, and a place where the respective foremen obtain their data. Logically, the chief planner should develop and evolve from the organization.

SELECTION OF EMPLOYEES BY MEANS OF QUANTITATIVE DETERMINATIONS

By Walter Dill Scott, Ph.D.,
Department of Psychology, Northwestern University.

Non-Quantitative

Historically it has been the practice of many commercial and industrial organizations to recuperate their forces of employees by the employment of young boys and girls as helpers for menial service. The wages paid these employees were small and no careful selection was deemed essential. These helpers were given no systematic instruction. There was no plan in routing them from one position to another in order that they might learn the whole or any significant part of the business. Promotion from the ranks was insisted upon in many instances even though no attention was given to preparation for such promotions. The children who accepted such positions were frequently those who had already failed in school. Their failures were mainly due to lack of interest in school work and this lack of interest could usually be traced to a lack of native intellectual ability. The ranks were, therefore, filled by many who had already proven themselves to be incompetents. No attempt was made to make the most of this defective native ability and yet the executive assumed that the higher positions must be filled by recruits from this untrained group of intellectual weaklings. This absurd method of selection is still in existence in many firms.

In certain houses the selection was based upon an inadequate estimation of the technical ability of the applicant. This ability was judged by the number and nature of positions previously held or by a sample performance on the part of the applicant. This sample performance in some cases meant a try-out for one or more days.

In some instances the native ability of the applicants has been estimated but inadequately. This judgment was based on the ability of the applicant as expressed in general terms by friends or by some statement as to the grade in school to which the applicant

had attained. Not infrequently the statements as to the intellectual ability were supplemented by general statements as to the moral character and health.

In all the methods thus far referred to no records were kept of the findings of the employer and, in fact, no records could be kept because none of the findings were reduced to quantitative determinations or any sort of terms of measurement.

Quantitative Determinations

During the last two years the writer has been attempting to reduce to quantitative determination all methods heretofore used in selecting employees and to supplement these where necessary.

One factor frequently recognized in the selection of employees is that of the *Previous Record,* but unfortunately this very important factor is frequently regarded as useless because of the impossibility of securing trustworthy and useable information from previous employers. In attempting to secure more trustworthy and useable information the following blank has been devised and used successfully.

.....1916

.....

.....

DEAR SIR:

Mr.....of.....has applied to us for a position as salesman and given you as reference. He states that he was employed by you as..... for a period.....

Will you please advise whether this information is correct?

.....

Why did the applicant leave your employment? .....

.....

Please place a check mark in the space below that indicates the character of his service:

	Good	Fair	Unsatisfactory
Work.....	( )	( )	( )
Conduct.....	( )	( )	( )
Ability.....	( )	( )	( )
Character.....	( )	( )	( )

Would you be willing to re-employ him? .....

Would you recommend him for the position applied for? .....

Out of ten men filling the position which the applicant held with you, what would be his comparative rank? .....
(If he would be the best, please mark his rank 1; if the poorest, please mark his rank 10; this estimate is of course only an approximation, but we will greatly appreciate your best judgment in the matter.)

Sincerely yours,

This blank does not encourage the former employer to use general and meaningless expressions, but whatever he says may be readily used in quantitative determinations. Unfortunately a great flexibility seems necessary in the use of the blank but where possible a demand is made that this blank should be filled out in full by the three last employers if the applicant has had that many. With these blanks before him the employment manager can change the data to a percentage basis. For instance: if all the previous employers fill in all the blanks under "Good" and put a (1) in the last paragraph, the applicant is then given 100 per cent on Previous Record. Corresponding percentages are given for all the various combinations found in the blank.

The *Physical Condition* of the applicant is judged by an experienced physician who makes his reports in quantitative terms. His viewpoint is not that of longevity but of health and vitality in relation to the service to be performed. The applicant whose physical organism seems best adapted for the type of work contemplated would be given 100 per cent on physical condition. Anything less than an ideal physical organism is graded less than 100 per cent depending upon the degree of defectiveness. Although experiments have been carried on, as here indicated, satisfactory results have not yet been secured, but, at least, a good beginning has been made.

The *Native Intellectual Ability* of the applicant is determined by means of a series of mental tests which test, not the learning, but the native ability. The series of tests employed are adjusted to the general type of applicants and the nature of the service to be rendered. For some positions emphasis is placed on inventive ability, on others tact, on others initiative, on others quickness of

thought, etc. The applicant is then graded by a percentage figure indicating the native ability in each of the qualities under consideration; as well as by a single figure to express the entire native intellectual ability so far as tested. The blank here reproduced is one that has been used with good success in testing salesmen for several organizations. The applicant is given 100 per cent in speed if he completes the blank in ten minutes; 0 per cent if he completes it in 60 minutes; 50 per cent if he completes it in 35 minutes, etc. He is given a grade of 100 per cent in accuracy if he makes no errors. Correspondingly lower grades are given for various mistakes or numbers of mistakes. No attempt has been made to determine definitely the particular mental ability tested by this blank. Although its use has been discontinued because of improved substitutes it might well be given as a fair sample. It was never given except as one of a series of tests, as no adequate conclusion can be based on the findings of a single test.

TEST I.

Read the General Directions before you do anything else.

General Directions:

Do what the printed instructions tell you to do.
Do not ask the examiner any questions about the examination.
Do not ask any other person who is taking the examination any questions or watch anyone to see what he or she does.
Work as rapidly as you can *without making any mistakes.*
If you do make a mistake, correct it neatly.
Do 1 first, then 2, then 3, and so on.

1. Write your name and permanent address here.

.....

.....

Instructions for 2, 3 and 4:

After each word printed below you are to write some word, according to the further directions. Write plainly, but as quickly as you can. If you cannot think of the right word in about 3 seconds, *go ahead to the next.*

2. Write the *opposites* of the words in this column, as shown in the first three.	3. Write words that fit the words in this column, in the way shown in the first three.	4. Write words that tell what sort of a thing each thing named is, as shown in the first three.
good—*bad*	drink—*water*	lily—*flower*
day—*night*	ask—*questions*	blue—*color*
up—*down*	subtract—*numbers*	diamond—*jewel*
long—	sing—	oak—
soft—	build—	measles—
white—	wear—	July—

far—
up—
smooth—
early—
dead—
hot—
asleep—

shoot—
scold—
win—
answer—
weave—
wink—
mend—

shark—
quinine—
beef—
canoe—
banana—
Atlantic—
Alps—

5. Add 17 to each of these numbers. Write the answers as shown in the first three.

29	*46*	
18	*35*	
60	*77*	
64		61
49		71
62		33
57		38
68		28
74		65
53		41
67		50
25		42
40		58

6. Get the answers to these problems as quickly as you can.

1. What number minus 16 equals 20?
2. A man spent $\frac{2}{3}$ of his money and had $8 left. How much had he at first?
3. At 15 cents a yard, how much will 7 feet of cloth cost?
4. A man bought land for $100. He sold it for $120, gaining $5 an acre. How many acres were there?
5. If $\frac{3}{4}$ of a gallon of oil costs 9 cents, what will 7 gallons cost?

7. Write opposites for this column, as shown in the first three. If you cannot think of the right word in about 10 seconds, go ahead to the next.

bravery—*cowardice*
friend—*enemy*
true—*false*

serious—
grand—
to win—
to respect—
frequently—
to lack—
apart—
stormy—
motion—
forcible—
straight—
to hold—
after—
to float—
rough—
to bless—
to take—
exciting—
clumsy—
unless—

8. Write in each line a fourth word that fits the third word in that line in the way that the second word fits the first, as shown in the first three lines. If you cannot think of the right word in about 10 seconds, go ahead.

color—red; name—*John*
page—book; handle—*knife*
fire—burns; soldiers—*fight*

eye—see; ear—
Monday—Tuesday; April—
do—did; see—
bird—sings; dog—
hour—minute; minute—
straw—hat; leather—
cloud—rain; sun—
hammer—tool; dictionary—
uncle—aunt; brother—
dog—puppy; cat—
little—less; much—
wash—face; sweep—
house—room; book—
sky—blue; grass—
swim—water; fly—
once—one; twice—
cat—fur; bird—
pan—tin; table—
buy—sell; come—
oyster—shell; banana—

9. Do what it says to do as quickly as you can, but be careful to notice just what it does say.

With your pencil make a dot over any one of these letters *F G H I J*, and a comma after the longest of these three words: *boy mother girl*. Then, if Christmas comes in March, make a cross right here.... but if not, pass along to the next question, and tell where the sun rises..... If you believe that Edison discovered America, cross out what you just wrote, but if it was some one else, put in a number to complete this sentence: "A horse has .... feet." Write *yes*, no matter whether China is in Africa or not ....; and then give a wrong answer to this question: "How many days are there in the week?"..... Write any letter except *g* just after this comma, and then write *no* if 2 times 5 are 10..... Now, if Tuesday comes after Monday, make two crosses here.....; but if not, make a circle here..... or else a square here..... Be sure to make three crosses between these two names of boys: George.....Henry. Notice these two numbers: *3*, *5*. If iron is heavier than water, write the larger number here....., but if iron is lighter, write the smaller number here..... Show by a cross when the nights are longer: in summer?.... in winter?.... Give the correct answer to this question: "Does water run uphill?"..... and repeat your answer here..... Do nothing here (5+7=.....), unless you skipped the preceding question; but write the first letter of your first name and the last letter of your last name at the ends of this line:.....

10. Place in the bracket preceding each English proverb the number of the African proverb to which the English proverb corresponds in meaning.

English Proverbs.	*African Proverbs.*
( ) Married in haste, we repent at leisure.	1. One tree does not make a forest.
( ) Answer a fool according to his folly.	2. "I nearly killed the bird." No one can eat "nearly" in a stew.
( ) One swallow does not make a summer.	3. Full-belly child says to hungry-belly child, "Keep good cheer."
( ) First catch your hare.	4. Distant firewood is good firewood.
( ) Adding insult to injury.	5. Ashes fly in the face of him who throws them.
( ) Curses come home to roost.	6. If the boy says he wants to tie the water with a string, ask him whether he means the water in the pot or the water in the lagoon.
( ) Distance lends enchantment to the view.	7. The ground-pig said: "I do not feel so angry with the man who killed me as with the man who dashed me on the ground afterward."
( ) We can all endure the misfortunes of others.	8. Quick loving a woman means quick not loving a woman.

Just as soon as you finish, give your paper to the examiner so as to get credit for having completed the work before time was called.

The *Technical Ability* of the applicant is reduced to quantitative determinations by various devises. Applicants for statistical positions are tested by means of the following statistical blank. This blank was devised for and used by an organization having a large amount of statistical work of the general type here indicated. The applicant is given 100 per cent in speed if he completes the task in 25 minutes and he is discredited 2 per cent for each minute thereafter. He is given 100 per cent in accuracy if he makes no mistakes. Five per cent is deducted from his grade for each error.

His handwriting is determined by the appearance of his copy

of the names and the numbers which immediately follow them. This transfer to quantitative determinations is made by means of the Ayres' Scale for Handwriting.

NAME .....

Perform all the additions and multiplications called for in the following problems:

ADDITION EXAMPLES.

17	26	27	72	23	45	52	19	45	23
42	51	24	14	47	13	86	78	67	72
38	47	83	39	86	68	23	67	78	36
91	82	19	81	54	77	35	23	37	68
54	63	45	26	36	86	67	86	96	39
41	53	67	78	86	17	42	38	91	36
52	67	86	37	32	26	51	47	82	26
86	34	23	96	44	27	24	83	19	45
23	78	45	72	36	72	14	39	62	63
35	19	67	23	68	23	47	86	54	54

MULTIPLICATION EXAMPLES.

7986	7869	9867
4523	5324	3425
8679	7968	7698
3542	3254	5423

Transcribe this page onto the next page. Make every figure and letter so that it can be read easily.

W. H. Abelmann	9685247	
W. H. Abelmann	1352680	
Edward Adam	573828	
Edward Adams	753823	
Wm. Anderson	56308	
Wm. Anderson	56308	
Peter Andersen	48365	
Peter Anderson	48365	
Benj. Andruskowitch	100085	
Thomas Andruskoweich	110085	
John Anglin	842745	
Thomas Anglim	842745	
E. J. Atchison	960261	
E. J. Atcheson	960261	
L. A. Auston	960162	
Bachalc Wm.	372819	
Bachale Wm.	272819	
J. Balderton	100278	
J. Balderson	102278	
August Bansback	26710	
Chas Banschback	95525	
Chas Barnett	52617	
Chas Burnett	82910	
Henry Burnett	111456	
Thomas Burrett	867543	
Andrew Bartoli	142567	
Paulina Bartold	55555	
John G. Battershill	42890	
A. Batterson	81392	
A. E. Bauermeister	185	
Henry Baumeister	67540	
Wallace Beaman	10025	
T. Baeman	56470	

Transcribe the preceding page onto this page as is indicated on the first three lines.

W. H. Abelmann	*9685247*
W. H. Abelmann	*1352680*
Edward Adam	*573828*

Look at each pair of numbers. Make a cross after every pair where the two numbers are *not* alike (as shown here):

		907328	907329×	760023	760023		
		216540	216540	297500	297600×		
		856728	847628×	107910	107910		
		700035	70035×	864271	864271		
		380270	380270	915823	715823×		
286090	289060	329865	329865	702645	702645	908701	908701
976534	976534	574052	574052	610124	611124	116872	116872
821004	821004	738216	783216	503763	503763	805794	805794
598362	598362	895422	895422	921821	921821	248067	248067
774819	747189	635767	635767	869030	863090	753915	753915
612345	612345	942424	942424	274502	274502	310283	210283
400705	400005	432615	432615	485734	485734	601943	601943
309268	309268	133002	133302	697685	697685	439250	439250
978882	978882	325961	325961	806960	806960	583622	583922
538620	538620	473820	473820	378117	378171	927474	927474
700214	700214	562143	562942	145900	145900	845825	845825
800000	800000	997723	997723	238392	238392	646935	646935
613579	613572	714926	714926	39273	39273	767561	767561
200140	200140	831125	831125	901284	901284	385000	380000
531251	531251	642030	642030	861357	861357	466799	467699
732124	732124	214728	214728	450549	490594	674887	674877
414362	414362	192563	192365	546457	546457	589746	589746
349093	349093	643215	643245	673860	673860	291968	291968
955785	95785	571326	571326	896812	896812	109590	109590
267682	267682	800026	800026	782933	782833	323041	323041
127003	127030	304349	304349	638542	638542	347391	347391
281114	281114	515420	515420	596169	596169	252824	252824
620259	620259	915656	915656	405970	405970	861753	861735
731622	736122	767817	787617	924441	92441	486798	486798
443378	443378	821738	821738	133508	133508	719060	719060

The technical ability of the applicant for a selling position is determined by means of a selling performance as indicated by the following "Instruction to Applicants" blank. Each "Buyer" estimates the selling performance on a percentage basis. The estimates of these several "Buyers" are combined into a single grade expressive of the applicant's technical ability as a salesman. Whatever the technical ability is, it must be expressed in quantitative terms before it becomes serviceable.

Instruction to Applicants

In Room A is a merchant who is to be regarded as a "buyer." You are to enter Room A, introduce yourself to Merchant A, and try to sell him some kind of merchandise. You will spend

five minutes with Mr. A, then pass on to Room B and repeat your selling talk to Merchant B. You will keep this up till you have called on all the "buyers."

You may sell any line of merchandise. The following are examples: automobiles, breakfast food, clothing, fountain pens, life insurance, office supplies, real estate, rubber goods, sporting goods, tobacco, typewriters, etc.

You may make the same talk to each "buyer." If you decide to sell an automobile, then you may assume that each of the merchants is an automobile dealer. If you decide to sell a breakfast food, then assume that each "buyer" is a grocer, etc.

Present your merchandise for five minutes in such a way that the "buyer" will actually want to purchase your line. Sell as you would if the "buyer" were a real prospective.

Prepare your line of talk in advance!

The *personality* of the applicant is an important factor but one particularly hard to reduce to quantitative determinations. The method which the writer has been employing is to have several "Interviewers" pass judgment upon the applicant. This judgment is based on personal appearance, tact, industry, promise of usefulness to the company, etc. Whatever the qualities are that are judged the "Interviewers" must summarize their judgment in a single figure, ordinarily, but not necessarily, a percentage figure. The judgments of all the "Interviewers" are then combined into a single figure expressive of the personality of the applicant.

Some of these fine quantitative determinations cited are of more importance than others but all must be combined into a single figure. This may be done by weighting the different figures according to their relative importance. The advantage of these different quantitative determinations and of the one summarized quantitative determination is that it makes it possible to compare these original estimates with later success. The adequacy or inadequacy of the parts of the test or of the whole system of testing can thus be accurately determined. In this way any particular test is eliminated if the prognosis based on that test fails to correspond to the later history of the worker. The chief advantage of the methods indicated above is not in having the right methods of testing to start with, but in having a method of handling results which make it possible to eliminate the unsuccessful factors in the

test and to strengthen those factors which are successful. This enables us to develop tests in the line of success as indicated by practice and not within the line which might be assumed by theory. If this method should claim the prerogative of "scientific," it would base the claim not upon the fact that it utilizes the findings of the medical examiner, nor upon the fact that it utilizes the findings of experimental psychologists, but upon the fact that it reduces the entire process to measurable terms which may be checked up by known and recognized standards.

THE USE OF MENTAL TESTS IN VOCATIONAL GUIDANCE [1]

BY GUY MONTROSE WHIPPLE,
Professor of Education, University of Illinois.

Mr. Chairman, Ladies and Gentlemen:

When Mr. Davis, just a few days ago, asked me to take the place of Dr. Bassett, who has been unfortunately prevented by illness from filling the engagement assigned him on your program, I consented with the understanding that the presiding officer in introducing me would apologize for the unavoidably hasty preparation and somewhat too sketchy character of my offering. I am unable to present to you anything like a comprehensive survey of the application of mental tests to vocational guidance, but have limited myself to presenting a few of the general principles that seem to me operative in that application and to illustrating, by reference to results recently obtained from a single mental test, something of the service that tests may render in the direction of diagnosing degree of general native ability.

I suppose there is little doubt that the majority of occupations are chosen by chance, which is equivalent to saying that they are not chosen at all. A considerable fraction, I suppose probably a majority, of those gainfully employed might, under very slightly changed conditions, have been in some other vocation than the one

[1] This paper was read by the author before the National Vocational Guidance Association at Detroit, February 22, 1916.

they are following. Nevertheless, there is little doubt that certain *types* of occupations or certain *levels* of occupation are pretty definitely selected or foreordained for every worker. Once I had passed my pre-adolescent conviction that to be a locomotive engineer was the acme of bliss, I never entertained any doubt but that I should devote my life to some profession. I think I might have succeeded as a lawyer or a physician. I think that an expert in vocational guidance might have discovered by a few tests even in my early high school career that I had a bent toward intellectual pursuits. I think he might also have discovered that I had a fondness for music, but no aptitude in the execution of music sufficient to justify a career as a musician. I think he might also have discovered that, while able to do creditable work in high-school and college mathematics, I did not show any special mathematical talent. I think he might have discovered that I succeeded quite well in tests that put a premium upon the use of language and that he might have augured that I could succeed as a teacher of languages (which was, as a matter of fact, one of my early college ambitions). I doubt very much, however, whether he could have discovered by any system of mental tests that I should ultimately devote my attention to psychology and its applications to educational problems.

These rather personal reflections I introduce to indicate my conviction: (1) that there is a tendency, even though not a clearly conscious tendency, for individuals to gravitate toward that type of occupation that is generally suited to their ability and inclinations; (2) that certain occupational levels are delimited by fairly definite boundaries over which some individuals may pass readily and others not at all; (3) that the application of mental tests may be expected to determine some of these boundaries and some of these individuals, but (4) that we cannot expect mental tests to yield any simple set of measuring rods by which school children may be sorted out precisely, mechanically and complacently into various occupational groups.

The psychologist, in my judgment, would better wear a veil of modesty and not seek to emulate the boastings of physiognomic charlatans who claim to have selected 12,000 persons for 12,000 jobs without one single mistake by their system of concave and convex faces!

It is in a modest spirit, then, that I shall consider a few of the aspects of the question: what can be hoped for from the psychologist in vocational guidance? More specifically, is there any chance that mental tests may be used to select persons for a position or to select positions for a person? The latter problem is confessedly far more difficult than the former. Though we admit that the selecting of a proper position for a person is very difficult, we may yet indirectly accomplish something toward it in a negative way. That is, it is possible that in attempting to select the right persons for a position, we may at least discover what different callings a given individual ought *not* to enter.

Now, the development of mental tests has been in two fairly distinct directions. In the first place, there have been developed systems or combinations of tests (of which the Binet-Simon tests are easily the best-known example) for estimating somewhat roughly the *general level of mental ability* of an individual: it is in this sense that we speak of a child as two years mentally retarded or of an adult as being average, inferior, in the top 5 per cent, etc. The Binet tests do not permit reliable diagnosis above the age of ten or eleven years; on this account they are of little use to the vocational expert, save that they would enable him to cull out at any stage during the elementary school period pupils of distinctly inferior mental ability, or, for that matter, to detect pupils of distinctly superior mental ability. The perfection of a system of mental tests diagnostic of general intelligence in the adolescent and adult years is a problem that is interesting several investigators. We are making some attacks upon it at the University of Illinois, and I shall presently set forth a few of the results as tokens of progress in this direction.

In the second place, there have been developed numerous mental tests aimed at the measurement in a more exact manner of *specific mental abilities*. Some of these tests may obviously be useful in the selection of individuals for certain occupations. A simple illustration is afforded in the use of tests of color-blindness to keep color-blind individuals from entering the naval or marine service, in the use of tests of auditory acuity to select applicants for work in telephone exchanges or in the use of tests of tonal discrimination as proposed by Seashore for preventing unmusical children from wasting undue time in the study of music. The principle involved here

is simple enough, but its extension in practice presents many difficulties. It is evident, I mean, that to lay out all the boundaries or barriers that surround a given calling implies a very precise and exhaustive analysis of the abilities that are demanded by that calling. So far as I am aware, no psychologist has as yet presented us with such a complete and comprehensive analysis of the mental aptitudes that are essential for any single occupation.

In principle, once more, such an analysis appears relatively easy. It seems as if almost anyone could lay down the demands of stenography and typewriting—a fair degree of retentive memory, a good "ear," a reasonable amount of motor skill and dexterity, a reasonable readiness in learning new associative connections, especially between the sounds of certain verbal elements and the execution of correlated movements of the pencil. It seems as if almost anyone possessed of a working knowledge of experimental psychology and mental testing could then lay out a series of specific tests for these several capacities, determine standards of performance in them, and check them up by examining groups of successful and groups of unsuccessful stenographers and typists. I think myself that this program could be carried out, yet the fact remains that no one has accomplished it—perhaps because commercial schools will not pay the expert.

Moreover, most of the attempts in this general direction (the hypothetical analysis of a calling and the construction of laboratory tests that are presumed to measure the needed abilities)—most of the attempts in this direction have been so academic and theoretical in character as to make little impression upon the hard-headed man of business, or even upon the expert's colleagues. A case in point is the proposal of Münsterberg to measure fitness for the work of the sea-captain by the dealing of cards in his "Situation Test" and the thinly veiled irony of Breese, of Cincinnati, who, according to a recent article, discovered by this test that one of his students who displayed unusual quickness of decision in a real emergency got a very low rank in the test, whereas the person most fitted for sea-captaincy of all those tested by him turned out to be a "co-ed"! The moral is self-evident. Academic and arm-chair theorizing and testing must be checked by the "acid test" of experience. We must find out by actual observation of the success or failure of

every individual tested which ones of our mental tests do really do the diagnosing for us.

I find objections, likewise, to the notion that all that it is necessary to do is to test the individual by the use of actual *samples* of the occupations for which he is being considered. Naturally, the person who wanted a new bookkeeper and who went to a commercial school to get one, might very well give him a problem in bookkeeping to test his abilities. But the real issue, as I understand it, is: how can we discover before the student ever starts on a commercial course that he has a reasonable chance for success in that calling? We want to *predict* as well as to select.

As a matter of fact, the most hopeful type of work in the field of mental testing for vocational guidance is, as Dr. Hollingworth has pointed out in a recent article,[2] the administering of *miscellaneous* tests of a sort that promise well and the subsequent selection of the best of these tests by the purely pragmatic standard of "delivering the goods." In other words, we test a considerable number of persons by a number of tests; we then keep tab on their careers and eventually discover which of our tests were really most useful in diagnosis, which tests correlated best with the actual performance of our examinees. You are doubtless all familiar with the elaborate scheme of this sort now under way at Cincinnati. Work of this sort is bound to be tedious, but it promises well for the future.

So much for the general principles that seem to me operative in the use of mental tests for vocational guidance. I propose in the remainder of the time allotted to me to present some results recent y obtained by the use of a mental test merely as a sample of the rather striking correspondence that obtains between the outcome of certain mental tests and actual achievement in certain forms of mental effort.

We decided at the University of Illinois to apply a number of mental tests to 200 or more students in the Urbana High School with the idea of comparing results in the tests with results in different types of school work and with the general intelligence of the students as estimated by their teachers. It would be impossible here to describe these tests in detail. Suffice to say that we sought in our selection of them to probe the mentality of the students from a number of different angles, and that any final determination of

[2] *School and Society*, June 26, 1915.

their intelligence would imply the pooling of the results of several tests. I speak today of preliminary results obtained from a single one only of these tests.

This test is known as the Analogies Test, or the Mixed Relations Test, and is described fully in my text-book.[3] The materials for this test consist of a series of twenty small cards, on each of which are printed three words. The first and second words stand in some sort of relation to one another; as soon as possible on seeing the card the student must name a fourth word which stands in a similar relation to the third word given on the card. The four words constitute a sort of verbal proportion. Thus, *King: Kingdom = Emperor: ?* Again, *Balloon: Air = Cork: ?* Again, *Winter: Summer = North Pole: ?* The experiment is conducted individually. As each card is shown, the experimenter starts a stop-watch; he stops the watch and reads the time when the subject utters the needed fourth term. If the student is unable to name the correct fourth term within 30 seconds, the time is recorded as 30 seconds and the next card is shown. The student's record is finally calculated as the average (or the median) of twenty trials with twenty different cards.

We shall eventually test about 200 students. The results already obtained show that school grade and age play a certain part in the outcome. As to relation with age, consider for a moment the following averages for sophomores 14, 15, 16, 17 and 18 years of age, respectively; they run 11.6 sec., 12.5 sec., 13.7 sec., 14.7 sec., 15.3 sec.—clear evidence that the younger the sophomore, the quicker, on the average, is he to detect the logical relations of the analogies test. The interpretation of these figures is that, on the average, the younger the pupil in a given high school class, the more intelligent he is.[4]

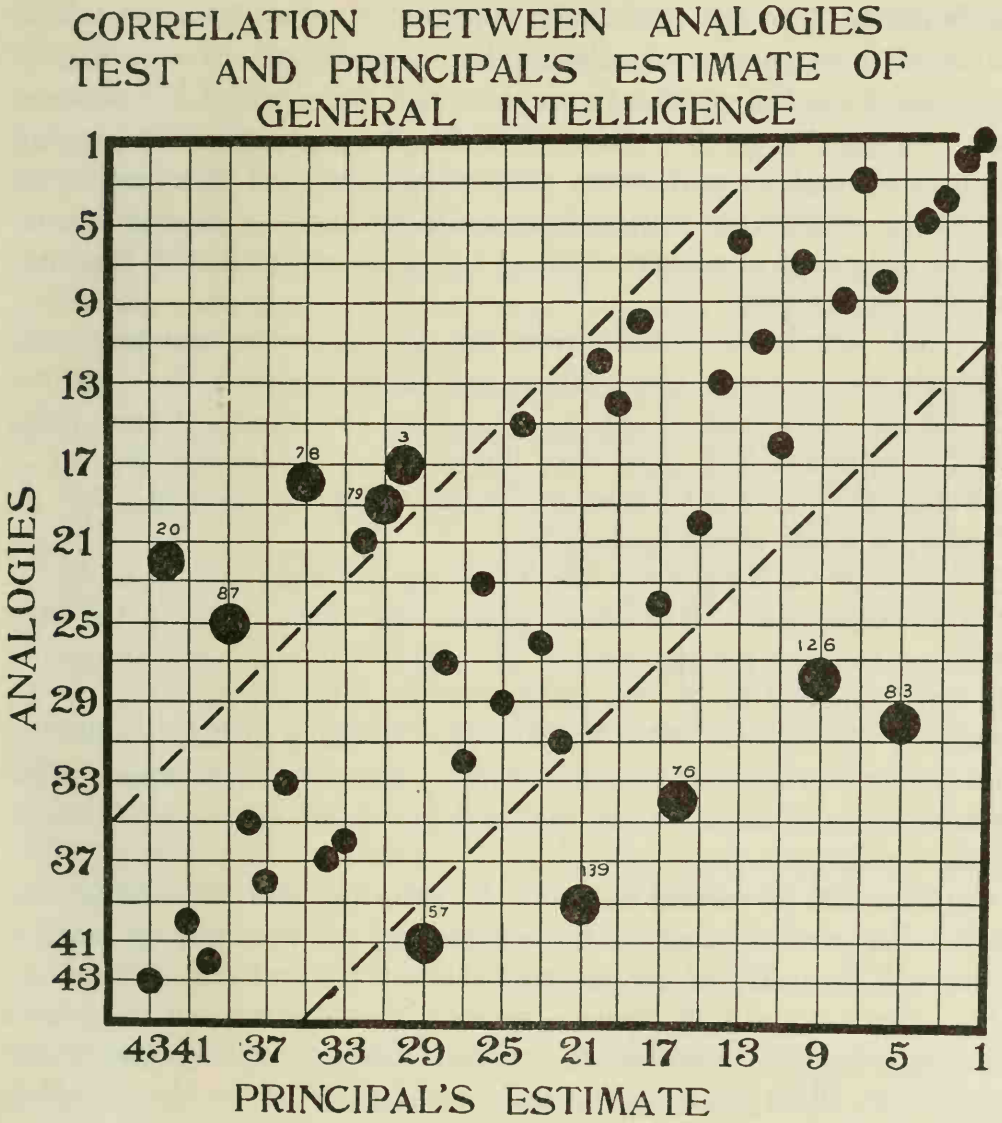
But these differences between groups arranged by classes or by

[3] See *Manual of Mental and Physical Tests*, 2d edition, Baltimore, Md. (especially under Test 34A in Part II).

[4] Those who believe that the tendency of older pupils to drop out of the high school is due to a failure on the part of the school to provide work suitable to their greater maturity need to consider whether they are not reversing the statement. It is much more likely that the older pupils drop out of the high school because they are intellectually incompetent to do the sort of work that is normal and proper to the high school.

ages are insignificant when compared with the differences of native ability revealed among individual students.

A few figures will bring this out. Correlation by the method of rank-order between performance in this test and the general intelli-



gence of forty-three high school freshmen as estimated by their English teacher was $r = +0.61$. The same correlation based on general intelligence as estimated by the high school principal was $r = +0.74$. This particular correlation is shown graphically in

figure 1. Here, each circle represents a high school freshman: his circle is located a distance *up* corresponding to his standing in the *analogies* test and a distance to the *right* corresponding to his *intelligence* as estimated by his principal. Number 1, best in our test, is Number 1 in the principal's opinion: Number 2 in our test is Number 2 in the principal's opinion: Number 3 in our test is Number 7 in the principal's opinion: Number 43 in our test is Number 43 in the principal's opinion. All the circles lying between the two parallel dotted lines evidently group along a line running from northeast to southwest, with such occasional fluctuations as might be anticipated (fluctuations quite as likely to be due to mistaken judgment of the principal as to failure of our test to measure ability accurately).

But outside the parallel lines are several circles that may well disturb the experimenter. These are cases in which the outcome of the test fails more or less conspicuously to accord with the principal's estimate and they may dispose you to be sceptical of a psychologist's claims to measure ability. But not too fast! Let us scrutinize a few of these exceptions.

Case 83 [5] is a girl rated 5 in 43 by the principal and 30 in 43 by the analogies test. Her school grades are found to lie in the 90's with an average for the year of 93. Here our test certainly seems to have "missed fire." On asking the girl why she did so poorly in our test we discover (what she had said nothing of before) that on the day when she was tested she had just returned to school after a two weeks' illness. We do not guarantee our test to work under such conditions.

Case 126 is rated 9 in 43 by the principal and 28 in 43 by the test. But we find that his average school grade is but 83, with a range of 79 to 87, where the pass mark is 75 and exemption is at 90. There is a strong probability that his intelligence is overrated by the principal. The boy is honest, robust, congenial, wholesome and much liked by the principal as a fine fellow in the school—sufficient explanation for the overrating of native intellectual ability.

[5] On the chart displayed at Detroit these 'exceptions' were indicated by red bands surrounding the circles (see the larger circles in figure 1). The numbering was merely used for convenience in referring to the list of students under investigation. The reader can locate the cases by reference on figure 1 to the rating given in each case by the analogies test and by the principal's estimate.

Case 139 is a girl ranked 21 in 43 by the principal and 39 in 43 by our test. The school records show that she never got a mark above 83, that her average mark is only 78 and that she barely passed in algebra and physiography. The fact that she has talent in drawing and painting and that some of her work has been on exhibition in the superintendent's office may very well account for the principal's overestimation of her general intelligence.

Case 78 brings out a touch of humor. This girl was ranked by us 18 in 43, but by the principal relegated to thirty-fifth place. On telephoning the principal to discover why he made such a decision we discovered (unfortunately, after this chart was made) that the principal "had the wrong pig by the ear." He was ranking another girl of the same name, and he agreed that our ranking of the girl we had tested was entirely right.

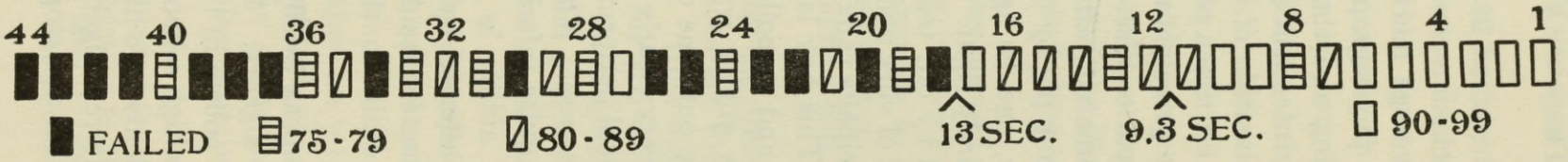
Case 20 is ranked by our test as average (22 in 43) but given by the principal a rank of very poor (42 in 43). Here we are inclined to agree with the principal's ranking, if intelligence is indicated by school performance. This boy is notoriously lazy, irrepressible, a shirker, an only child and a spoiled one. The experimenter's subjective estimate of his ability was recorded as "average," which agrees exactly with the outcome of our test.

Our data suggest very clearly these conclusions: when ability is strikingly superior, school performance is superior, whether the student is industrious or not. When ability is strikingly inferior, school performance is quite inferior whether the student is industrious or not. When ability is of average amount, school performance is distinctly affected by industry and zeal. Most of the divergences between the test results and the school's records or the teacher's estimates pertain to the position of these students of average native ability.

Finally, I wish to speak briefly of the peculiar relation between the analogies test and algebra. Early in our work we found that students who did very poorly in the analogies test quite frequently reported algebra as the high school subject which was most difficult for them, whereas students who did excellently in the analogies test almost invariably preferred algebra to other studies and secured high grades in it. I shall not stop to discuss why this relation o b

RELATION BETWEEN ANALOGIES TEST AND ALGEBRA GRADES

44 HIGH-SCHOOL FRESHMEN.



tains, save to hazard the guess that algebra puts a high premium upon ability to perceive and handle logical relations and that this ability is also demanded in the analogies test. I shall demonstrate the nature of the relation by a few figures and a graphic representation. The correlation between the mathematical ability of 30 freshmen, as estimated by the teacher of algebra in the Urbana High School, and the ranking of these freshmen in the analogies test reaches the extraordinary amount of $r = +0.78$. The correlation between the actual grades in algebra of 43 freshmen and their standing in the analogies test reaches the equally surprising amount $r = 0+71$ (P. E. about .07). This last relation is shown in figure 2, to which your attention is now called. Here each rectangle represents one high school freshman. The cases are arranged in order from right to left, according to their performance in the analogies test. Number 1, at the right, is best in our test; Number 43 at the left, is poorest in our test. Their grades in algebra are represented by different fillings of the rectangles. Solid rectangles mean "failed in algebra." Unfilled rectangles mean "secured a mark of 90 or above in algebra." Rectangles with horizontal cross-lines mean "poor in algebra" (grades between 75, passing, and 79). Rectangles with a diagonal cross-line mean "medium in algebra" (grades between 80 and 89). Notice the following features. The highest 6 students in our test get 90 or above in algebra. The poorest 4 students in our test all fail in algebra. Take a point of division represented in our test by a speed of 13 seconds. Below this score are 27 cases; 15 of them fail in algebra. Above this score are 17 cases; not one of them fails in algebra. Take another point represented by a speed of 9.3 seconds in the test. Above this mark are 11 cases of which 8 gain grades in algebra of 90 or above.

There are on this chart, naturally, a few instances in which the grade in algebra does not accord so neatly with performance in the test. I have an adequate explanation of them.[6]

[6] Case 53 is ranked 7 in our test but gets only 83 in algebra. She is a girl who is known in the school as a 'character.' She is carrying seven subjects and is reciting at every period of the day. Her morals are not of the best and she apparently spends most of her time outside of school in walking the streets. She is known as a sporty personage and shows indications of being a pathological liar. These conditions are sufficient to explain why, although seventh in ability, according to our test, she receives a mark of only 83 in algebra.

Case 85 ranks 8 in our test but barely passed in algebra. It is found that

What I have presented is but a portion of the results that have been secured from the application of a single mental test. I leave it to your judgment whether these results are not sufficiently significant to justify my original contention that there is a place in the public schools for work with other mental tests than the Binet-Simon system to which attention has been thus far restricted. Could any one ask for a better diagnostic of future success or failure in algebra than the results of this analogies test alone—a test that can be applied to any student within fifteen minutes? When other tests with which we are working and of which I have said nothing at all—tests that, for example, show interesting correlations with linguistic instead of mathematical ability—are included, it will be seen that it is no fanciful dream to declare that the psychologist is not far from a position in which he can render most valuable assistance to school authorities by the examination of *individual* students for the diagnosis of their mental equipment, their personal abilities and disabilities of mind.

he comes from a very poor home, is very dirty and slovenly in appearance, but has evident ability, because he won a prize for the construction of a kite in competition with a large number of boys. We find on further investigation that he missed a test in algebra that he failed to make up, which accounts for his grade of 75.

ADOPTING STANDARDS TO MEET TRADE TRAINING REQUIREMENTS

By E. G. Allen,

Director, Mechanical Department, Cass Technical High School, Detroit, Mich.

The authorities at Cass Technical High School have found it necessary to issue certificates to evening school and continuation students who have completed various lines of work. When the time came to classify a man as a machinist, the question "What is a machinist?" was put to various employment managers, shop foremen and machinists themselves without finding a clear-cut analysis of the trade requirements.

According to agreement, however, certificates must be given and some school authority must vouch for the ability of the one obtaining such a certificate. Diligent inquiry brought very little help from the employer. Only a very few employers have given any thought to the definite educational or trade requirements necessary for the positions they have to offer. The usual answer one gets when approaching a business man or an employer concerning the definite knowledge his employee should have is "Teach him to think" or to use more exact terms "Teach the boy to use his head and we will do the rest." This, of course, is very definite knowledge upon which to work, and is the very thing for which public schools were established.

After nearly a year of systematic endeavor to establish standards in trade training the instructors at Cass Technical High School have compiled an outline, or schedule, for the various machines in the machine shop, and for bench work, assuming that the man who can operate satisfactorily the lathe, planer, shaper, milling machine, and drill press, and can do vice and assembly work, should be classed as a machinist. Those who can operate only part of these machines should be classified as a lathe hand, a shaper hand, etc., according to the machine or machines he is able to operate. The outline for each machine is made up as follows:

Only the outline for the lathe is given in this article.

Beginning at the left-hand column and reading from top to bottom, is a list of machine operations. Crossing the outline from left to right is given, approximately, the knowledge of the tools, machines, etc., which is required in the corresponding division under the head of machine operations. Full columns mean that the information is general.

These outlines are being used as follows: Students applying at the school for admission into the day or evening classes are given an outline covering the particular machine about which information is sought. If it be, for example, the lathe, the student is asked to check all that he knows about the lathe. This gives at once a starting point, and what is more important, places before the applicant the requirements necessary to qualify as an operator on that particular machine. The combined outlines meet the requirements of the trade.

The management of Cass Technical High School will make arrangements to give all applicants an examination covering the outlines. Those who can qualify according to the schedule and who can show not less than two years' practical shop experience with one company will be given a machinist's certificate by the Board of Education of Detroit.

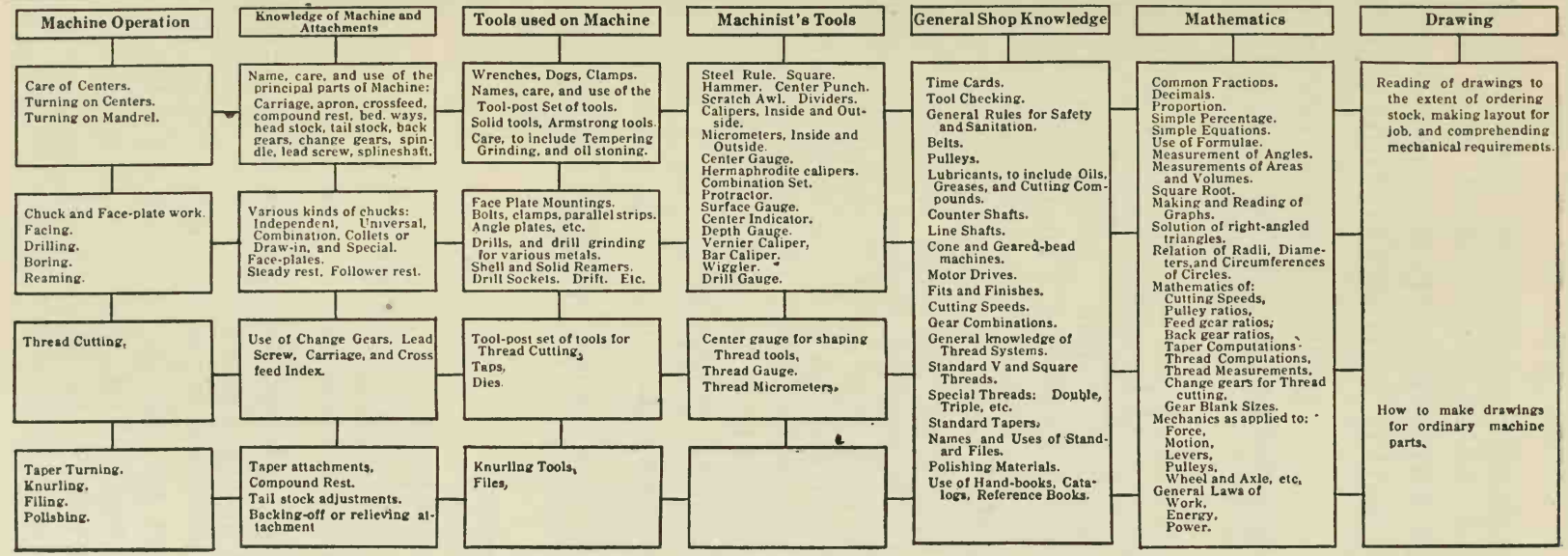
In making up these outlines each machine was considered as an independent unit. All the information necessary to a complete mastery of the machine was scheduled regardless of how much that information might overlap onto the requirements for other machines.

Finally a grouped chart was made showing special requirements for each machine and the knowledge common to all.

Such a schedule of special and general requirements places before each operator a graphic illustration of just what part of the machinist's trade he has covered, when he has mastered one machine, and also what special information he must obtain if he expects to advance to another machine.

As stated above when a man has demonstrated his ability to do any part of the work called for in the schedule he is given a certificate stating exactly what he can do. This makes it possible for employment managers to employ men more intelligently and it is hoped that in time will lead to the demand that all tradesmen carry certificates issued by the public schools.

Machinist Requirements for Engine Lathe Work



PROBLEMS ARISING AND METHODS USED IN INTERVIEWING AND SELECTING EMPLOYES

By Katharine Huey,

Manager, Employment Division of the Employment Department, The Curtis Publishing Company.

In a highly developed manufacturing plant where each section of each division is a complicated machine, there offers a possibility for almost every kind of labor. Each section is in itself an organization of which each employe is a vital factor. How to find the right man for any of the several thousand vacancies when such an opening occurs is the problem of the employment manager. Although he cannot be expected to know the intricacies of these several thousand jobs, he must understand the dovetailing and the interdependence of each department on the other.

A particular analysis of every department in chart form with its individual positions listed regarding duties, compensation and possibilities, should be in the hands of every employment manager. It should comprise such points as:

(a) Nature of the work.
(b) Specific importance.
(c) Working conditions (involving physical or nervous strain).
(d) Range of wages.
(e) Hours.
(f) Permanency.
(g) Age limits.
(h) Sources of supply.
(i) Educational and personal requirements.
(j) Necessary experience.
(k) Opportunity for promotion.

Though an arduous task, the compiling of such a chart by the employment manager personally will be of utmost value to him.

Every position is in reality a potential vacancy to the employment manager who should know its demands so well that in his later task of interviewing applicants, he can readily decide in which particular groove his prospect belongs.

The manager must know more, however. Not only the job

itself but the individual tastes, prejudices or idiosyncracies of each department manager must be thoroughly understood. However ridiculous it may seem, it behooves the employment department to cater to these whims. If a manager is known to consider tall, slender, dignified women more efficient than small, brisk, energetic ones; other things being equal, give him what he wants and reserve the energetic, nervous type for his fellow manager who in his turn, may interpret poise and calm as indications of stupidity and sloth.

The Prospect File

It should be the aim of the manager to have at all times upon his list, the names of applicants for practically any vacancy that may arise. This is not possible in times of general industrial activity when the labor market is small, as the most desirable material is idle but a short time. Each locality will have its particular problems. In Pennsylvania, at the present time, owing to the Child Labor Law, effective January 1, 1916, which provides that minors under sixteen attend school eight hours a week, the sixteen-year-old boy is in great demand. This is due to the fact that employers who need only one boy, cannot always conveniently arrange for the boy's periodical absence and hence will only employ boys over sixteen, with the result that an efficient boy of sixteen is rarely out of work. For this reason to keep on hand a file of intelligent sixteen-year-old boys has been found to be impossible. On the other hand, on account of the small demand, a list of desirable errand boys under sixteen can be well maintained and a new employe procured from this list immediately.

SOURCES OF SUPPLY

Present Employes

Employes of the company should be encouraged to consult with the employment department for the purpose of stating their inclinations, ambitions and desires for promotion. A careful list of these employes should be kept together with an analysis of their capabilities and aspirations. In case of vacancies, these employes should be given an opportunity for promotion.

Department managers should be obliged to send the names of employes who are about to be discontinued on account of decrease in work, to the employment office at least forty-eight hours in advance of the date fixed for their departure so that they may be trans-

ferred to vacancies in other departments; or failing such, be considered for re-employment at a future date.

In filling every vacancy, it is obvious that present and former employes should be given preference. Not only is the employe, trained in the policy of the company, better fitted for more important work than the new employe, but by systematically endeavoring to promote the efficient workers, the loyalty of the force is increased and the greatest cause of discontent removed.

Daily Applicants

The next source of supply should be derived from carefully kept classified records of those applying at the employment office. Hours for interviewing should be set aside daily and should include the hour from twelve to one since many of the best prospective employes who are employed elsewhere, seek new opportunities during their luncheon period.

Schools, Colleges and Technical Schools

Schools should be visited and graduates encouraged to register with the employment office. Moreover, personal contact with the principals and heads of the employment departments of each school should be one of the duties of the employment manager. The schools are ready to coöperate. The public trades and commercial schools in particular are making a sincere effort to meet the needs of the employer; and they are entitled to his encouragement.

For the most part, the candidates supplied are desirable. One tendency alone on the part of school authorities is difficult to combat. The pupil's value is too often judged on the academic standing alone without regard to the personality of the individual. This is but natural since the academic scale has been for so long the only basis of measurement within the school. Business colleges, typewriter companies and manufacturers of office devices are frequently valuable sources of skilled office labor.

Societies, heads of the Y. M. C. A.'s, and the Y. W. C. A.'s, state employment bureaus and social service committees, frequently suggest the names of worthy candidates. Assistance from these sources is not without its drawbacks, however, as the employment manager must occasionally expend much time in interviewing protégés obviously unfit but sent by social workers who have

become so interested in their "cases" as to be very naturally blinded to their limitations.

Written Applications

Letters of application are daily received at the employment office. Those who by past experience and present inclination appear to be desirable candidates should be given an opportunity to call for a personal interview. In this way a constant stream of potential material is being received.

Advertisement

From time to time blind advertisements should be inserted in the daily newspapers to replenish any type of labor that appears to be scarce. A few of the most promising replies are selected and the writers sent for immediately. Others should be sent a general letter to call at their convenience.

Last and in times of great stress, resort must be had to the open advertisement, whose only redeeming feature is quick action. These are the most important sources of supply.

REQUISITES OF THE EMPLOYMENT OFFICE

Location

The employment office should be located on the ground floor and equipped with both a house entrance and a street exit. It should comprise a large waiting room, a detail office and a separate office for personal interviews.

Service

The clerks and assistants in the employment office should be not only possessed of poise, presence of mind, cheerfulness of disposition, discretion and abundance of tact, but they should be imbued with a sense of loyalty to the company as a whole and a realization of the fact that their department is primarily one of service.

As in the case of employes in any service department, the nerve strain on the personnel of the employment department is frequently excessive, owing to the fact that all demands, even if unreasonable, must be met with the greatest cheerfulness. It is important, therefore, that the personal relation between the employment manager

and his staff should be pleasant and informal and that his assistants should be encouraged to bring their problems to him at all times. This not only acts as an outlet for the employe, but has the added effect of bringing to the employment manager's attention, many conditions in his own and other departments that need readjusting.

With convenient quarters and intelligent and sympathetic assistance, the daily interviews of applicants can be handled efficiently and in order.

Personal Qualifications

What characteristics do we require in these prospective employes? Each position has, of course, its particular demands, hence general rules that will apply to individual cases of selection are difficult. From the job of laborer, where much brawn and some brain is needed, to the position requiring all brain and no brawn, the variations of qualifications are legion.

Applicants divide themselves into three main groups: those employed elsewhere who seek a better opportunity; the unemployed, and those classified as unemployable. These patently undesirables must be eliminated from the desirable and possible applicants.

Each applicant should fill in an application blank containing information regarding his age, education and previous experience. This application, presented to the manager previous to his personal interview with the applicant, gives him an opportunity to estimate the qualifications that the candidate should be expected to possess in view of his past experience.

In the case of clerical or office help, handwriting and the accuracy with which questions on the application blank are answered, serve as a preliminary guide to the mental qualifications of the candidate, though this theory is most unsound in the case of applicants for unskilled labor. Each applicant desirable or possible, should be granted a private interview with the manager.

Appearance

Personal appearance is the first impression the manager obtains. Appearance should not be interpreted to mean general effect or dress, which should be considered in their proper places. It is the face of the applicant and most particularly the expression of his

eyes and mouth which are of utmost importance in the estimate of the employer.

I lay emphasis on this point as much of the unnecessary "hiring and firing" of help may be attributed to the fact that the prospective employer, misled by the general pleasing appearance of his young applicant, and mistaking personal vanity and fashion's conventionality for an indication of neatness and efficiency, frequently hires hastily only to discover subsequently that he is burdened with an ornament instead of an implement.

Cordial Reception

Even where the manager has fifty or more interviews a day, he should obviously expend as intense interest on each of his numerous applicants as he would naturally show to an occasional visitor. To greet the candidate by rising and shaking hands not only relieves the formality of the situation and dispels much of the applicant's self-consciousness, but also gives the manager an indication of personality through the firmness or flabbiness of the grasp. Since, however, custom, education and social training are all factors entering into the heartiness and spontaneity of the hand-shake, it should be regarded not as indelible evidence but merely as a possible indication.

Expression

The manager should, on greeting the candidate, look at him attentively and earnestly and during the first part of the interview, study his face carefully. This not only gives him an opportunity to discover whether his candidate's expression betrays intelligence, earnestness and candor, but adds much to putting the candidate at his ease and inspiring him with the confidence which he needs in order to display his qualifications to the best advantage.

Character Analysis

Some employers justly claim to be able to determine the characteristics of an individual by analyzing all physical conditions such as the height of his brow, the curve of his nose and the shape of his head. Though not an adherent to this method I am not unappreciative of the fact that productive scientific study has been conducted along these lines and that on this basis, careful and

efficient selections have been made. Even if this method is followed, the employment manager must have in addition an understanding of the more usual human characteristics and tendencies. He should be able to interpret in his applicant with some degree of accuracy, such qualities as: the firmness of his eye, the set of his jaw, the self-assurance of his manner, the degree of culture of his speech, as well as noticeable mannerisms.

He should ask such questions as serve to draw out the applicant since his point of view is generally more important than the actual information. Occasionally the reverse is true and the candidate becomes verbose, requiring not "drawing out" but "pinning down." Under these circumstances, it is sometimes necessary to make him account fully for his employable time.

Purpose and Team Sense

What is his purpose in applying? Has he any serious reason? Has he heard "it is a nice place to work?" Has he a friend working here? Is he seriously seeking work or did he just "happen in?" His attitude toward the economic scheme in life in general, however crudely stated, furnishes more of a guide towards purpose than any assertion he may make of his desire to obtain new work and his attitude toward previous employment is of utmost significance. Where he worked, under what conditions, what hours he observed and how monotonous or diversified his task, are questions that will not only elicit specific information but will reveal in nearly every case whether the applicant in his previous employment had the all-important qualities of loyalty and "team sense." An applicant instinctively possessed of "team sense" comprising willingness, cheerfulness and confidence, is a risk so safe as to be a golden investment to any employer. The ground work is there ready for unlimited development. The loyalty will follow if he is suitably placed and if he receives from his employer the coöperation to which he is entitled.

Home Conditions

Questions regarding the individual's home, responsibility, the number in the family and the number of wage-earners will bring out pertinent information. It is at this point, with an understanding of the home, financial, and housing conditions of the applicant

that his clothes and general appearance begin to bear a real significance. His tastes and aspirations should be ascertained and he should be encouraged to enlarge upon the kind of work he would prefer to be engaged in.

Health

The physical status of the applicant so far as weight, healthy condition of the skin and alertness of movement are concerned should be taken into consideration in the general estimate; the actual physical condition of each prospective employe should, however, be scientifically determined by a medical examiner.

These are some of the general characteristics desirable in all employes: intelligence, serious attitude towards work, willingness, earnestness, "team sense," loyalty and good health. At this point comes into play the manager's knowledge of the various jobs and the specific assignment of the applicant.

Assignment

His prospective employe, John Jones, he recognizes as desirable so far as personal qualifications and characteristics are concerned but into which of the various holes this particular peg shall be thrust, depends largely upon the candidate's previous education and experience. From the company's point of view, he must become a permanent employe. This can only be accomplished by placing him either in the work he feels he wants and for which he is fitted, or failing that in a position that will develop along the desired lines. From the employe's point of view, he must be aided, encouraged and stimulated to develop steadily. This is not the only problem to be solved regarding John, however. The other all-important element of his prospective manager enters in. Granted two or more jobs of more or less similar nature, for which manager is John best fitted temperamentally? Mr. A. would not take him because he is too young, while Mr. B. would not desire him because he has had too much experience. Mr. C. would reject him because he is employed at the present time, but there is Mr. D. or Mr. E. whom he will suit in every respect. If neither Mr. D. nor Mr. E. has an opening, John Jones' application will be assigned to a folder together with a full description of him, there to remain until there is a demand for his services. As a guide in making a written analysis

of the candidate, multigraphed cards bearing the following headings are found to be useful:—

Qualifications	*Type of Mind*	*Mentality*	*Remarks*
Personality	Executive	Super. alert	
Build	Detail	Alert	
Weight	Promotive	Average	
Appearance	Accounting	Slow	
Expression	Clerical	Dull	
English	Selling		
Initiative	Mechanical		

This preliminary "sizing up" and classification of an applicant cannot be done too carefully. On the accuracy with which the analysis is made, depends the dispatch with which subsequent positions are filled.

Unexpected Demands for Labor

In times of sudden pressure of new work, when the supply of available names on file will not meet the demand, recourse must be made to open advertisement, from the applicants to which a more hasty selection is of necessity made. There is only one redeeming feature to open advertisement and that is the rapidity with which temporary workers may be secured.

Filling Requisitions for Help

Where the function of the employment office is not to employ but to recommend candidates for positions, applicants fitted for the position in accordance with the company's standard, who in addition, suit the personal requirements of the manager should alone be recommended.

When vacancies occur, the classified files must be consulted and the most suitable applicants summoned. In cases of skilled office workers such as stenographers, typists, estimators, addressers, comptometer and multigraph operators, tests should be given for speed and accuracy and the standardization division (if there is one) should furnish the requirements for these tests. Recommendations or references from outside sources do not prove infallible, but should in all cases be investigated.

Knowledge of the Labor Market

The number of applicants sent for must exceed the number of positions vacant in proportion to the supply of the labor market. To use the case of the young boy in Pennsylvania, should a request be received for two sixteen-year-old boys, seven or eight of the most desirable applicants on the file would not be too many to send for as the chances are that 50 per cent will be satisfactorily employed. If the request on the other hand, be for two boys under sixteen, on account of the present lack of demand, three boys would be enough to summon.

Outlining the Position

Before any applicant for a prospective position is recommended, he must be told what the general nature of his work will be and given exact information regarding working hours, salary and the possibility of advancement. He should be encouraged to ask questions about the work and should not be recommended if he shows the slightest hesitancy in complying with the conditions.

With every applicant recommended for a position, there should be sent a card which demands either the acceptance of the applicant or a complete explanation as to why he is not satisfactory. The following form has been found expedient:

Mr. Jones (Manager of Business Office)

Harry Smith has been interviewed and is recommended to you for the position of *Errand Boy*.

After you have interviewed this applicant, please ask him to return at once to this office.

When applicant is accepted by you, an immediate medical examination will be arranged. Please state here when you wish applicant to report for work

_____.

If case of rejection, you will greatly assist this Division in intelligently referring applicants to you by explaining below in what way he has not satisfied your requirements.

_____

_____

_____

After the applicant is engaged by his new manager, he is examined by the company's physician. The physician on passing the prospective employe, sends him with his certificate to the employment manager, who after giving him an introductory note to his foreman, should embrace the opportunity to congratulate him on having obtained the position and explain to him that the function of the employment department is not merely to employ but to assist all employes to maintain satisfactory employment and to that end, it is always ready to consult with employes at any time. A cordial invitation to report on his progress should be extended.

Reports

All cards of recommendation should be filed according to departments and monthly reports made of the number of candidates accepted and rejected. The reasons for rejections not only serve as a guide to the employment manager for future recommendations, but also give him definite data on which to work when the rejections from any one department become either frequent or whimsical.

Finally, careful reports by departments must be maintained to show by month the number of employes engaged and discontinued. To a very great extent the labor turnover may be said to measure the efficiency of the employment department.

The labor turnover must be no idle speculation. It must be accurate and so devised as to show by running figures its improvement or retrogression.

Functions of the Employment Manager

To sustain a service department for the executives, an advisory bureau for the employes, to fill vacancies with the minimum loss of time and with the maximum satisfaction to executives, and to secure for those vacancies only those who will become permanent employes; to transfer those employes not needed in one department to fill vacancies where pressure is great, to help to maintain a contented, permanent working force, these are some of the problems of the employment manager.

THE VALUE OF THE APPLICATION FORM

By Chas. P. Avery,
Marshall Field & Company, Chicago.

By many of those seeking employment, the application form is considered a "necessary evil" and one of the numerous trials of the unemployed. Few seem to realize the fact that its value is twofold:—First: to the applicant; Second: to the employer.

The larger value is assuredly to the applicant, for the application form frequently decides the vital question "to be or not to be" the accepted suppliant. The second value is dependent upon the insight and experience of the employer.

The Form

Is the brief or detailed application form of more value? This must be judged from the scope of the employment bureau, and the number of employees considered as a normal force. The more detailed the form, the more frequently will a marked hesitancy be manifest on the part of the applicant, when asked to "fill out and return." Some application forms request the prospective employee to place a check against his or her predominant characteristics, enumerating thirty to fifty such, as "honest, ambitious, prompt, careful," etc. One such form was returned to a superintendent with the astonishing but befitting notation "self praise is no recommendation."

Request for Form

The attitude of applicants when requesting form of application conveys some idea of the intensity of the desire for employment. On the theory that "the more urgent is the need for a position, the more industrious will be the worker," a close observer will note hesitation of some in proffering the request for a blank as compared with the anxiety of others to embrace the opportunity offered by this form of introduction to the employer. "Do I have to fill this out?" "May I take this home and mail it to you?" and such questions, often indicate a reluctance signifying the lack of an urgent desire for employment. The one who will accept "anything" at

least shows a strong desire for employment even though his ability may be very limited. The familiarity of some when requesting a blank at once suggests their adaptability to certain classes of work, and a corresponding unfitness for other duties where reserve is essential. The applicant who has not graduated from eighth grade at school and who asks "Say Jack, can I get a job here?" would probably be suited for the shipping division, but surely not considered seriously for floorman.

Acceptance of Form

Application blanks when accepted with a slight reluctance on the part of applicant would seem to indicate some lack of interest in the vacancy to be filled. Such hesitancy might also be due to lack of confidence, while an eagerly grasped blank in most instances very clearly exposes an earnest desire to qualify for any suitable position. There is a peculiar smile to be noticed occasionally when an applicant has been presented with form of application. Observation has led the writer to recognize this as the forerunner of a misrepresentation, and personally styles it a "slipped one over" smile. Careful analysis of the information submitted on the form will usually bring to light the deception occasioning this particular expression.

Filling in the Form

Some persons exhibit as much apparent mental effort in this process as does the average layman when studying an abstruse legal document. The mental processes are slow, and such an applicant should be placed at work not requiring rapid thought nor quick decisions. To some individuals, the required facts are not easily nor quickly recalled, resulting in a longer time to furnish information asked for. The delay of some may be occasioned by a desire to conceal the true facts, which, when given rapidly and with assurance have the suggestion of assurance supported by absolute truthfulness.

Presentation of Form

Whether via mail or in person the presentation of the form offers a study in personal values equal to any other phase of the employment processes. To throw the application on the employer's desk, to hand it upside down, second side up, folded in two or rolled

like a mailing tube, all suggest a lack of training and thought, and tend to detract from the qualifications of the applicant. A dirty application will be usually presented in a slovenly manner while the reverse will usually obtain in the neatly written and clean paper.

Contents

A form lacking in neatness and badly written would disqualify an applicant for an office position, especially if the spelling was incorrect. Such an applicant, however, might possibly be a splendid mechanic or general utility man. Incomplete detail in the application proffered might also deter a decision in the direction of a position requiring care and attention to detail.

The accuracy of the information submitted must be assured, and any corrections or erasures will act as interrogation points on the subjects so changed. Age and salary seem to be most subject to these "changes of mind."

Deductions

The completely filled blank now acts as a representative of the applicant, and will make his appeal as forcefully as the effort and knowledge he has put into its data. This material will guide the employer in placing the applicant at work where his greatest value and knowledge may be utilized.

If unable to at once find a suitable place for applicant, the blank may be marked to indicate work for which he or she might be considered later, *e.g.*, trucker, bookkeeper, machinist, draughtsman, errands, sales, telephone, etc. From the personal characteristics of the suppliant the form may also be used to record the grade in the class indicated.

1st grade	11=specially good	—12=very good.
2nd "	21=good	—22=fair.
3rd "	31=poor	—32=unacceptable.

Prospects

Names of "prospective employees" may now be listed on cards or charts and filed under the classification for which they are considered eligible. The applications may be filed alphabetically for quick reference and later consideration. This file of "prospects" may be used to great advantage in such business houses as employ

large forces of help. A vacancy occurs and the file gives the suitable prospects with phone numbers and addresses.

Information

References of all employees should be attached to applications, and filed numerically or alphabetically in a file of "current" blanks. Should personal information be required regarding an employee, this file will contain just as much as the application form has required, plus the references. Promotions may be arranged with the coöperation of this valuable personal file, which, with the record of transfers from one department to another considered as added experience, will enable the superintendent to gauge possibilities for future advancement and responsibility of employees.

When an employee leaves the firm, his application and references may be marked with record of conduct and reason for leaving, and transferred to a "Left" or "Former Employees" file. Answers to inquiries from future employers may be made from data compiled and the complete record may be referred to and refiled in the "Current" file if former employees are reengaged.

Summary

From the foregoing it is evident that the application form has an ever increasing value from the moment that an applicant first approaches the employer, to the severance of their interests. With such an understanding it would seem that a fairly detailed form has the advantage over the short blank. The value to the applicant corresponds exactly with that to the employer inasmuch as his saleable assets are presented concisely to the employer. The psychological phases of acceptance and presentation may be played upon by both parties in proportion to the requirements of the position to be filled.

THE NEED FOR AND VALUE OF PHYSICAL EXAMINATION OF EMPLOYES AS ILLUSTRATED IN THE WORK OF THE RIKE-KUMLER COMPANY

By Frederick H. Rike,

President, The Rike-Kumler Co., Dayton, Ohio.

The inspiration for, and the realization of the value of, a physical examination of employes came to our company from the opportunity of observing this same work as it has been done in The National Cash Register Company of this city for a number of years, and also from the testimony of the management of that company as to the benefits derived.

The Rike-Kumler Company operates a department store in the city of Dayton. The determination to apply a physical examination as a test of employment took definite form in the spring of 1912, when we moved into a new store with largely increased space and the opening of many new departments. These new departments included a large restaurant and tea room, a lunch counter, a soda fountain, a bakery, ice cream making, candy manufacturing and a market department. Our ambition to make these departments thoroughly sanitary, clean and attractive led us to the very natural fear that we might have external conditions all they should be, and yet, without some check and information as to the people actually doing the work, we might unknowingly be harboring filth and disease more dangerous than open dirt and disorder. It was this need that decided us on physical examination and definite physical requirements as a test for employment.

Again, our employes number from 600 to 850 people, and our experience with certain cases of tubercular trouble and other diseases emphasized the necessity for some means of protection of the members of our store family from each other, and also the great desirability and importance of safeguarding our customers.

Again, our experience had shown to us that had we possessed accurate information as to the true physical condition of our employes, we should, in a number of instances, have been instrumental in suggesting changes in location and in mode of living

that might have saved years of life for work and earning capacity. We felt keenly our responsibility in this regard, and this in no small way fixed our determination to undertake this work.

Another consideration leading to our decision was our belief in this work as a means of developing individual and collective efficiency in our whole organization. We have been doing educational work among our people for a number of years, and the value of mental equipment was always recognized, and definite means were taken to supply it. In the same way, good health was recognized as a very important factor in the success of our business, and yet nothing was done to emphasize its importance. The store superintendent charged with the duties of employment, without a physical examination, must rely on his superficial observation and the integrity of the applicants' statements relative to health. Supported, however, by a physical examination, his investigation may be confined to the applicant's other qualifications for the position he or she desires to occupy. Thus was the need for such work demonstrated to us.

The value of physical examination of employes has been proven by our actual experience. Here is the testimony of our present store superintendent:

> Our house physician, nurse and hospital perform such valuable service to our business in the way of keeping our people on the firing line, in the way of economy to our employes and ourselves, that to dispense with it would be an unwise move. Stores not having such facilities do not realize that the investment would pay large annual health dividends.

An outline of the way this work is handled may be of interest. We have a small but well equipped hospital and are prepared to take care of first aid treatment in case of accident, and there are beds for temporary rest in acute cases. The work is done by a house physician who devotes a definite part of each day to the task. A nurse is employed who devotes her full time, and is in charge of the hospital and the demands upon it in the doctor's absence. The service rendered is free of any expense to the employes and is only compulsory to the extent of the initial or entrance examination.

At the time we began the work of physical examination, we made a compulsory examination of all the people in our employ, and somewhat to our surprise we met only a minimum of objection

and criticism. Each applicant for a position is examined when employed, and is required to measure up to certain definite standards. First of all, there must be freedom from contagious diseases or epilepsy; they must be fairly sound as to the special senses, particularly sight and hearing; throats and teeth are carefully examined; the heart and lungs must be in a reasonably sound condition, and if hernia, varicosities or flat feet are present, they must be under proper control.

Every employe is free to call on the doctor or may be sent by the department head to him during his hours. In order to give some idea of the use that is made of this service by the employes on their own account, our records show that on an average we give more than 350 treatments to our employes monthly, and that customers are taken care of to the average of about fifteen per month.

On account of having this service available, we have educated our employes to use it promptly, with the result that we have almost wholly eliminated septic infections or blood poisoning resulting from minor accidents. Approximately 75 per cent of our employes are women. Women who must be on their feet suffer more at the menstrual period than those who may be at rest. One of the great functions of our service is the relief of this suffering, and we have found that not only is relief possible, but that many days of employment are saved both for the employes and ourselves through the ability to render this service scientifically and promptly.

The house physician has charge of all matters relating to store sanitation and is ready at all times, and does give to employes advice on any topic relating to diet, hygiene or general health.

It has developed in our work here that about 5 per cent of all applicants for positions, and who would, without a physical examination, be employed, are shown to be unfit for service by such an examination. The reasons for their rejection classify themselves in the order of their importance as follows:

First, Venereal diseases.
Second, Tubercular troubles.
Third, Skin troubles of a contagious nature.
Fourth, Eye diseases of a contagious nature.
Fifth, Physical unfitness not of a contagious nature.

In addition, we find that there are about 5 per cent whom we put in a doubtful class, but whom we employ. Those employed, however, under these conditions, are examined weekly and this examination is compulsory until we are sure that they are able to do their work safely and improve in their physical condition while doing so. Those coming in this class are frequently under weight or are in poor physical condition, owing to their having done work for which they were unfitted.

These examinations also give the house physician and the employment officer the ability to work together and to shift a person from one position to another for which that person is better fitted physically.

Fully 25 per cent of the applicants have minor defects which are corrected when their attention is called to them, but which would be neglected if they were not examined. Oftentimes these defects are unknown and a distinct gain has been made to the person examined and also to the company for which he or she must work. These minor defects classify themselves as follows:

First, Defective teeth.
Second, Nose and throat troubles.
Third, Defective vision.
Fourth, Flat feet.
Fifth, Varicose veins of different types.
Sixth, Slight hernia.

All of these are usually corrected promptly, and our observation shows that attention to these minor details results very soon in an increase in general health and a greater capacity for work.

The remaining percentage is found to be in good condition when first examined. Inasmuch as ours is the only mercantile firm in the city to exact physical examination as a qualification for employment, we find a number who, knowing themselves unfit, will not submit to an examination and leave rather than submit to it.

In the past four years, by the precautions we have taken and the physical examination insisted upon, we have been able to protect our employes so that we have not had one acute eruptive contagious disease develop during their service. True, some have developed outside of the store, but we have been fortunate enough to get them away from their employment and under the care of

their physician forty-eight hours before the contagious condition appeared. We have had venereal disease and tuberculosis develop within the organization, but examination has revealed these conditions and enabled us to eliminate those affected from the service.

One of the startling and impressive facts that has been developed is that our records show that the majority of applicants infected with venereal disease have been those applying for positions in our kitchen, soda dispensing, and market departments.

As a concrete example of the conditions that are met from time to time, your attention is called to the following cases:

Last fall the cashier in one of the departments on the second floor came to work complaining of a sore throat. As soon as the store opened, she went to the hospital. The nurse found conditions serious and sent her home immediately. Two days later the information was brought to the store that she had scarlet fever, but due to the prompt action taken here, no one was exposed. The cashier, too, having medical attention early, had every advantage in fighting the disease and the chance of a light attack and a quick recovery.

A similar case was that of a saleswoman in the basement department who developed diphtheria several days after the physician had insisted that she go home and stay there.

One of the bus boys serving in the dining room was found to be in the incipient stages of tuberculosis. He was transferred to other work and was regularly observed by the doctor with the result that he is steadily improving.

Just at the holiday time Dayton was confronted with an epidemic of the grippe, and it would be difficult to estimate the good our institution derived through what might be termed first aid work in warding off the attacks of this disease. We would undoubtedly have been unable to supply substitutes to fill the places of those who would have been afflicted. This point brings up the fact that the benefit of our physical examination and the work done by the physician and nurse is evidenced by the raising of the percentage of regular attendance to a very high mark.

We, in common with other merchants and manufacturers, are very much concerned about our "labor turnover" and are endeavoring to get the "labor turnover" as low as is possible.

We believe that our work in the matter of physical examination and service is going to help us reduce this percentage.

As was pointed out earlier in the paper, we are making constant endeavor to train our employes, employing an educational director who not only gives lessons as to materials and to the method of store service, but who teaches our people many elementary branches. Our physical examination prevents our training those who are unfit and enables us to give our best efforts toward those who are not otherwise handicapped.

Our experience thus has demonstrated that compulsory physical examination of employes has tangible and intangible value. Our store life is lived with a feeling of security that would otherwise be impossible. We are conscious that, in addition to providing all the material comforts for our patrons, we have taken steps to protect them from unknown and unobserved dangers. We believe there is an actual dollar and cents value in the increase of the percentage of regular attendance among our employes and in the fact that we are not wasting effort in the training of the physically unfit.

We feel there is a splendid moral effect in the impression that every employe must receive from our insistence on a physical examination, in that they put a new value on health and all the means that may be used to acquire and keep it. Undoubtedly it has increased our general store efficiency and has better enabled us to render the kind of service we owe to the whole community.

INTRODUCING THE NEW EMPLOYE

By Charles L. Pearson,

German American Button Company, Rochester, N. Y.

It is customary for most corporations to include among their assets an item for "good will," which is supposed to represent the value of what their customers think of them. But how much is it worth to a corporation to have the good will of its employes, based on mutual understanding and a spirit of coöperation? It has been conservatively estimated that it costs from upwards fifty dollars to break in a new employe. If a plant has the good will of its employes, how much of this expense can be saved by not having to break in so many new employes? The future may see the "good will" of the employes classed as an asset no less in importance than the good will of the customers.

The good will of the employes is not necessarily based on wages alone. Unless the working conditions also produce health, happiness, and an understanding of the spirit of the organization, a stable force cannot be maintained. These things are not, however, necessarily dependent upon so-called "welfare work," which too often smacks of paternalism.

A modern industrial plant is a very complex organization made up of many individuals, each one necessarily intent upon the duties and responsibilities demanded by modern efficiency in production. And what of the stranger who enters this hive of industry? Shall he drift in almost unnoticed, do his daily work for a time and drift out again unnoticed? Or is it possible to make him feel that he is to be treated as an individual human being and not as a machine, as one who has come to stay and who is of enough importance to be given some personal attention?

In the plant of the German-American Button Company at Rochester the proper introducing of new employes to personnel, policies, and social activities is a very important function of the labor bureau. It is the policy to develop personal relations and mutual understanding right from the start, to deal with the employe as an individual rather than as a "number."

Likely candidates are interviewed by members of the labor bureau and application records are made. Men interview the male applicants and a woman interviews the women applicants. A well equipped hospital is maintained, with a nurse in constant attendance, and all applicants considered desirable are required to pass a physical examination by the plant physician before acceptance.

Good health is an important factor and it is necessary that employes be physically fit for their tasks. To illustrate: the matching of colors or shades requires good eyesight and employes having weak eyes or who are color blind should not be assigned to this work.

If the applicant is approved by the physician, he is told by the interviewer that he has been accepted and is instructed when to report for work. The time designated is not the usual starting time of the factory, but some hour within the work period, the time set being dependent upon the number to be placed at work. When the new employe reports for work, he is not taken directly to his department but has another talk with the manager of the labor bureau. At this time the following points are explained:

1. Personnel.
2. Use of hospital, dispensary, and rest rooms.
3. Lunch room.
4. Hours of work.
5. Use of coat rooms.
6. Method and time of paying off.
7. Registration.
8. Rules regarding tardiness.
9. Earned vacation plan.
10. Reason for and value of rest periods.

The new employe is then taken to his department and introduced to his foreman and to the instructors who are to educate him in his duties. On the way to the department he is shown the nearest toilet room.

If the new employe plans to use the lunch room, arrangements are made by the labor bureau with an old employe to see that he gets to the lunch room all right and is introduced to others at the same table. The employment manager is responsible for seeing that this is done. Employes are not permitted to remain in departments during the lunch hour.

About two weeks after the new employe starts to work, he is sent for by the employment manager at a time agreed upon with the foreman. He is then given an opportunity to bring up any points concerning organization or activities that are not clear. This gives him an opportunity to make complaints regarding his treatment or relations with others.

At this interview some of the social and educational activities are also explained. The endeavor is to acquaint the new employe with the spirit of the organization and arouse his interest. The general topics explained at this time are:

1. Educational courses.
2. Library.
3. Suggestion system.
4. Use of park and recreation grounds.
5. Associated Recreation Clubs.
6. Progress Club.

These clubs are social, recreational and educational organizations controlled entirely by the employes.

Individual records are kept, showing the progress and development of the employe, covering earnings, attendance, deportment, suggestions made, and other items of a personal nature. These records are used in determining future advancement.

It may seem that all this is unjustified extravagance; but if such development of personal relations creates good will and mutual understanding, is it not worth while? The experience of this company indicates that it is.

THE INSTRUCTION OF NEW EMPLOYES IN METHODS OF SERVICE

By Arthur Williams,
The New York Edison Company.

One of the problems—perhaps the greatest—before the business world of the United States at the time this article is written is how will the industries of the United States be affected when the war in Europe is brought to a close? That business in this country will be affected is a belief too universal to require discussion. Whether a trade war will follow the military war and the nature of such a contest and its permanent effects, as well as temporary changes, is the problem for which so many are earnestly seeking a solution. If there is to be a trade war, permanent in character, in what respect are the industries of the United States prepared? Plant and equipment of United States industries are probably equal to plant and equipment of any other nation. For example, our railroads have increased the weight of their rails, the size of their locomotives, the capacity of their cars and the weight of their train loads to a point where further development will be difficult if, indeed, much further development is possible.

Plant and equipment in our factories have likewise kept pace with the development of our railroads. The electrical industry of this country is superior, both in its manufacturing and operating branches, to the electrical industries of any other nation. With the use of manufactured power, especially electric energy, production has ceased to be the predominant factor in industry. Prior to the outbreak of the European war, in almost every line of industry, the ability to produce was greater than the demands of the available markets; nor was the problem of transportation at all perplexing. In fact, there was much idle equipment. The predominant problem of industry for the past thirty years has been to stimulate consumption and thus increase demand.

An analysis of plant and equipment of American industries in comparison with similar industries in other countries indicates the United States should be able to hold her present trade, other than

the present unusual demands, as the result of the war. But an analysis of the personnel of industry—if this term may be used to identify the workers—does not show so favorably in comparison.

Germany has long trained her workers and other of the leading nations have established facilities for training the so-called masses to a much greater extent than has been done in the United States. While it is true, then, that the industries of the United States have set the pace in the development of plant and equipment, it is not true that they have kept abreast of other leading nations in training the workers.

Our commercial world is now, however, fast realizing that the vast body of men which makes up our great armies of industry and commerce possesses a store of potentialities which as yet has received hardly more than an awakening touch. With this realization has come another—that to stimulate these powers the employer must provide some form of definite training to fit his employes for the requirements of his particular business. This statement should not be interpreted as a reflection upon the educational standards of our various school systems. If it must be construed as a criticism, it may be directed at the economic system which enables so many of our boys and young men, girls and young women, to enter business with their educations only half completed, or perhaps hardly begun.

It is not my purpose to quote figures, showing how many boys and girls leave school before finishing the elementary courses, nor to point out the small percentage of those who finish the high school courses, nor even to refer, other than in passing, to the small part of the whole—less than 5 per cent—who enter business with the advantage of a college or any other considerable degree of secondary education. These things are self-evident to one who contemplates the vast armies of unskilled and untrained men and women—for today women must be included in any consideration affecting the welfare of our industrial workers.

The problem of the half trained boy in business is not greater than that of the middle aged man. The boy in the first years of his business life can shift from job to job and each time he makes the shift secure perhaps a slightly increased wage. The grown man, however, must stick to his position because he is capable of filling no other, and oftentimes he is employed largely through the

sentimentality of his employer. If by some misfortune he finds himself among the job hunters, his chances of doing as well for himself in another place are decidedly lessened. All of this is due primarily to the fact that either during his years of preparation for business or after he has entered the business field, the opportunities of finding and developing his best characteristics have been neglected.

While much attention is now being given to the subject of employment, very little is actually known as to what methods may be devised by which can be determined the work for which a certain type of individual is best fitted. There are those who contend that this information can be ascertained by psychological analysis of individual characteristics, and, as a result, the best work for that person will be readily discovered. The second theory, and one which seems better suited for practical application, holds that the only way to determine the line of endeavor in which an individual will be most successful is by actual experience and accomplishment. It is because of these things partly that the employers of today are alive to the need of some constructive method of fitting employes for and advancing them in service. Corporations everywhere are either active in some form of educational work on behalf of their employes, or at least are considering the best methods for selecting employes and of applying training to insure best results in their business.

This new activity, which is really the fifth great subdivision of any large industrial enterprise, might aptly be termed "employe relations." It takes its place and is coming to be recognized as having equal importance with the other larger elements in the management of any considerable employing body. By way of amplifying this statement, it might be pointed out that when the first industrial corporation was organized, it consisted of three general subdivisions—production, financing and accounting, and marketing. It was soon recognized, however, that an important element was lacking, and the element of traffic or the transportation of products of industry was necessarily added as an executive or administrative requirement. With provision for these four subdivisions, executives of our industrial organizations, until very recent periods, have believed they were fulfilling all of the demands to be properly made upon them.

More recently, however, attention has been given to the personnel or the human elements of the organization, with the result that there have come into existence, with varying degrees of effectiveness, activities which have entirely to do with employe relations specifically to the employing organization and in general to industry as a whole. Under the broad scope of "employe relations" the work is carried on of careful selection of employes and of fitting them for the specific and the best service of the employer. Under this heading also may be grouped the employer's efforts toward education, general as well as specific, the establishment of social organizations, sick and death benefits, of pensions or service annuities, of profit-sharing or partnership, home acquiring and savings and loan activities.

By way of a change from a presentation of generalities to the consideration of a specific instance of corporation activity along educational lines, may be mentioned the educational work of The New York Edison Company. This now covers three organized fields—technical and practical engineering, accounting and the commercial service. While the actual training of the individual is of the first importance, it is nevertheless essential that the personality and the attitude of the student employe, as well as the graduate, shall be closely observed. A part of the value to be derived from training a man lies in the opportunity which this period of training gives the employer to study and analyze his characteristics, to become familiar with his personality and to find out about him those things which will best fit him for the service of his employer—which perhaps, and probably, shall fit him best also to fulfill the obligations and opportunities of his own life.

To meet these conditions the company in question has established in connection with its educational work a record system, for the purpose of determining the relative efficiency of the employes in the accomplishment of its work—the rendering of a satisfactory public service. These records are kept by card indices through which the past and present services of the employe can be quickly determined and based upon these performances his chances of the future and of fulfilling higher positions may be determined with a fair degree of accuracy. The tendency is growing to promote or demote or occasionally request the resignation of employes as a result of the studies of these indices. With the establishment of

the company's commercial schools in 1911, part of the primary work of that year consisted of a survey of the men and, in this connection, the necessary facts about their earlier education and employment, as well as the results secured in their present employment were obtained and recorded.

In the commercial department of the company there are more than five hundred employes, ranging from the office boys to the heads of departments, and everyone below the position of manager falls within the scope of the company's educational and record system. The plan becomes effective the moment anyone enters the company's service, and, as indicated, it includes every representative of the company, large or small, who comes in contact with the public, either directly or by telephone or correspondence. This personal record continues as long as the employe remains in the service of the company. Blanks are provided for each item of information, the earliest entries including the name, address, age, the bureau entered and the immediate position. Then is recorded the education of the employe, whatever it has been, grammar school, high school or college, followed by the list of positions previously held. A new employe is assigned to minor duties, so that he may become acquainted with the organization and aims of the company, its recognition of responsibility to the public as a feature of service, in fact, all the more important duties of the position which the employe occupies. His capabilities and attitude toward his work are under constant observation and at suitable intervals are made matter of record. This is as important to the employe as to the company, as, at least eventually, all of these records form a basis for increases in salary and promotion to higher positions. They often form also a basis of recommendation to other employers who might have perhaps more immediately opportunities for the higher positions.

In passing it might be said that an employe, who has rendered good service, going out to take a higher position elsewhere, always goes with the fullest good will of the company. Perhaps the greatest encouragement to faithful service is the realization that it will be recognized outside as well as within the company and this also greatly encourages those who remain to better individual development and a higher degree of general service. The employes of the company are entitled to first consideration when promotions are in

order. Their records are carefully studied and promotions are made wherever practicable from the ranks of the company. In the absence of special circumstances, new men take the lower positions.

The general method of "hiring and firing" is not followed. If a man is employed for some specific position in which he does not make good, effort is made to find another position in which his term of past service can be used cumulatively to the advantage both of the employe and of the company. The man who perhaps cannot get along with one manager may work cheerfully with another, or who cannot perform one kind of service may perform excellently another kind of service.

When the personal records, especially the earlier records, show an unfavorable report, transfers to different positions and departments are made, often with excellent results. Frequently, an earlier report of unsatisfactory service will be corrected by later reports. Frequently, also, inefficiency on the part of employes is not radical or permanent, but may be a matter of adjustment, either through a better understanding of the service required or a change in environment in which the employe has greater personal aptitude to render satisfactory service.

These human records are constantly becoming more accurate. As time passes they are based less and less upon the opinions of one person or even two or three persons, but become the result of a variety of surveys and studies in which the composite result will average a high degree of accuracy. One important point is that the record shall be made at the time—not left to memory or hazy impression. After a fair period of time the record should be a complete picture by which the employe can be identified by anyone fairly acquainted with him.

It should not be inferred that this "human survey" is the complete record by which an employe is judged. The employe's school work, covering a two years' course, is a part. Then there is the record for attendance, for coöperative or "team," as well as initiatory, effort, and even further effort is made to select men that are of the executive or administrative type. The commercial schools are conducted within the company's time and, it would seem needless to say, at the expense of the company. Enrollment and attendance are compulsory. Classes meet weekly and every alternate week there are written examinations based upon questions distrib-

uted before the lectures. At the end of the year the student must have a rating of 75 per cent to pass, or falling below that point he must re-enroll and begin all over again. If he gets what is called the "C" rating, which is between 75 and 82 per cent, a special course of instruction is taken through the summer, with a later examination in the autumn, when it is expected that the student will have gained at least a "B" or possibly an "A," the highest rating the company school gives. If he still has no higher than the "C" rating, so far as the school courses are concerned the results are considered of an unsatisfactory nature. But the student has an opportunity at any time, through a course of study and examination, to improve his rating and this opportunity continues so long as he is in the employ of the company. Failing to get even the lower rating, however, does not mean that the student shall be discharged. The result of the school course becomes a permanent part of the student's record, influencing his position and salary to a certain extent, but not in any final sense. There have been instances in which the school record is exceedingly poor, but the service of the employe as a whole of a very high and valuable order—and this after all is the end desired.

There is one feature in favor of the corporation school which is found in no other. This is the immediate application in some practical way of the information the student acquires. Thus the lesson of today may be applied and used tomorrow and the student is immediately impressed by its value and effectiveness. On the contrary, the students of the primary and secondary schools, including the colleges, are studying at far greater distances from their activities and the application is not as immediate or direct, and the educational effort is much less efficiently made.

Reference has been made to the training classes of the company to which all new men are first assigned. It is here that the first opportunity occurs to study the personality of the new employe and it is here that he gets his first impression of the character of the service into which he has entered. It frequently happens that in advancing from the training classes to a position of greater responsibility the new employe is assigned to work for which he is temperamentally unfitted. This, however, soon becomes apparent and he is tried out in another position and, if necessary, still another until finally he reaches the work in which his best efforts may be

absorbed. In the case of new men this is a simple proceeding, but with older employes, the problem is more difficult. The man who has been in the company's service any considerable period of time has in this experience an asset which is or should be of value to the company; he is acquainted with the service of the company and in acquiring this experience he represents a certain investment which should not be willingly lost. Usually it is some time before a new employe, in other than the operating departments, makes a direct return upon the salary he receives, thus representing a certain investment on the part of the company. Naturally it would be undesirable to lose this investment, if it can be conserved.

The result of the school courses is summed up finally in certificates, the highest being the "A" grade and representative of the type of man that ordinarily would fill the position of a general agent in a public utility. He must be a man acquainted with the technique of the service, with questions relating to public matters, with contracts, and have a certain degree of executive or administrative ability, through which he can direct the services of other men. The holder of this certificate need not of necessity have had practical experience in all of these directions, but in the judgment of those in charge of the educational work he must possess qualifications which would fit him for such a position.

With the four elements of our industrial life so amply provided for and the growing recognition of the importance of this fifth—this newly recognized element—there would seem to be little doubt but that the permanent and constructive activities of the country in industry and commerce will go forward by leaps and bounds, beyond our highest expectations. If there has been a weakness in our industrial life, it has been in our relative disregard of the benefits of general as well as specific education, and, broadly speaking, of the essential welfare of our industrial workers. With this element of weakness removed, and with human beings as sanely and as wisely regarded and protected as we have in the past protected our machines and our tangible properties, nothing will be needed to maintain our industrial, our financial and our human supremacy in this world.

AMERICANIZATION: A CONSERVATION POLICY FOR INDUSTRY

By Frances A. Kellor,

National Americanization Committee, New York City.

The appointment of the Naval Consulting Board signifies a new departure in the preparedness campaign which has been thrilling the country for many months. It signifies the wane of the propagandist movement and the dawn of a constructive program; the supplanting of agitation by action; the routing of denunciation by coöperation.

We are in the future to hear more of industrial preparedness than of military preparedness. We are not only to have more battleships, but to conserve men; not only to increase our production capacity for ammunition, but to steady our labor market to make this possible. No other nation in the world would think itself equipped to give battle, to endure the strain of long campaigns and sieges, to mobilize and train an efficient army, that had the seasonal occupations, the heavy labor turnover, and the employment system that prevails in America. No other nation would be considered efficient that had millions of men in its midst not speaking the national language, not of its citizenship, from whom it asked nothing but manual toil and to whom it gave little but the pay envelope.

We hear much these days of a new term. It is called *Americanization*. We use it rather glibly—it sounds well, but what does it mean? It means somehow or other that America shall profit by what immigrants bring in addition to their labor; it means that along with rights go duties; it means that Americans must give more to the foreigner than a job and a bunk to sleep in; that in some way we must all have a more common understanding of the opportunities and ideals of America; of the meaning of her institutions and liberties; and that we can converse in a common language and stand up under one flag.

Americanizing America is the task and responsibility of Americans. There is no subterfuge, excuse, or sophistry by which

native born sons can escape this duty. Like Mr. Ross and Miss Repplier, many bewail the fate of the American who lives in a tenement or town made unendurable by foreigners, but the custody of America's institutions, liberties and destinies belongs to native born Americans. The trouble is they have found it easier to retreat than advance, easier to move than to change their environment, easier to ostracize than to tolerate and educate their foreign born neighbors. Making money and being comfortable and not seeing the other side of American life has been the easiest way out.

We are face to face with two fundamental propositions in our Americanization movement. Our citizenship toll is heavy in our waste of men. The very essence of preparedness is to keep every man in America in the best possible physical and spiritual condition, and the place to do it is the industry, and the industrial community.

Important as the cities are, the strength of this nation does not rest in the greatest cities. There are east of the Alleghenies some 500 so called munitions plants, upon which we must rely mainly in time of war. Not one is in New York City or Boston. The most vulnerable point in our transportation system is not at the terminal; it is at the various points from which supplies and men must be started with ease and rapidity and carried along, and the coördination of the interlocking systems throughout the country. The Lake Superior copper region may in a moment become more important than any seaport city. We must therefore look to our thousands of industries scattered throughout the land for our fundamental preparedness.

Americanization which looks to the unity of all peoples in America behind America's flag on American soil, so far as it relates to industry, covers three main subjects. Our existing industries have so overgrown themselves and everything else that we have to arrive at our goal chiefly by processes of elimination. In our response to war orders and building of plants we seem in some instances to have forgotten every standard of health, decency and comfort. We build plants without houses for workmen; we build houses without sanitation or comfort; we build towns without streets or goverment almost over-night; we work men overtime until the symbol of America is the dollar—therefore we have to build our Americanization platform by *elimination*.

The first fundamental proposition in industrial preparedness

is the elimination of the physical toll by such physical construction of the plant as will give the best possible conditions in light, air, freedom from dust, wash and lunch rooms and appliances for preventing and for dealing with accidents.

The second fundamental proposition is the elimination of production tolls by economy in administration, elimination of waste, etc., by the adoption of so-called efficiency methods.

The third fundamental proposition is the elimination of citizenship tolls, (because in the last analysis the country pays the bills) by the adoption of methods which will conserve workmen and stabilize the labor market.

The labor turnover in this country in various industries is appalling. Germany would consider it military suicide and France would deal with it as a national disgrace. With our seasonal industries, our indifference to responsibility for dovetailing, our methods of employment, we find the average industry employing anywhere from two to five men to keep one at a cost of $30 per man for every one employed. I submit as a fundamental proposition that we cannot use to any great advantage any of our chief Americanization agencies—the school, the naturalization court, the home, the community responsibility, personal friendships or a stake in America—with the man who goes from industry to industry, from town to camp, and who finally comes to regard the saloon as the one agency adapted to his needs and always open. By our present system the immigrant peasant who has lived all his life in his home village, becomes the itinerant workman of America and the greatest of our state "trotters."

We shall never stabilize the labor market by legislation. We may facilitate it by a national system of employment exchanges which may also point the way, but the task is to be done in every small industry and every large industry under the spur of economy and in a spirit of national preparedness. The industry must install an employment department under capable management which will enable it to know its men and place them in the first instance effectively throughout the plant. This must be supplemented with a fair system of promotions and transfers based on efficiency records; and dismissals should not be made without giving the employe a hearing and attempting adjustment.

Most important in stabilizing the labor supply is the wide ex-

tension of insurance to include accidents, industrial diseases, health, sickness and service annuities. The basis of securing these is the widest possible education upon the subject of labor turnover—its cost and causes. We need first a campaign on labor turnover as a menace to preparedness which will cause every employer to look into his own status on this subject.

The Naval Consulting Board through its sub-committee on Industrial Preparedness is to secure a census of the industries; to find out what American industry can actually produce in munitions of war; to apply that knowledge in a practical way which will put the plants of this country into the service of the government behind the army and navy; to form "such an organization of skilled labor as will not get off the job when war comes, that will not allow skilled workers to go to the front only to be pulled back later, more or less demoralized, to tasks from which they should never have been taken."

If we agree that with the reduction in waste in employment should go increase in citizenship then we must also know our present resources in men, in terms of how many are unable to use our language, how many are illiterate, how many are ineligible to service because they owe allegiance to another country, how many are below par because of bad housing and other remediable living conditions. Knowing this, we can proceed to the constructive side and find out our capacity for expansion and increased power, measured by the extent to which we change these conditions.

The stand already taken by the Packard Motor Company and other concerns that a knowledge of English or willingness to learn it and to acquire citizenship are conditions precedent to employment marks the beginning of a new era. To the answer that this forces citizenship without preparation I desire to point out the precedent long established by law by which men cannot get employment without their full citizenship papers in Arizona, California, Idaho, New Jersey, Louisiana, Pennsylvania and Wyoming, to say nothing of restrictions in many or most states requiring citizenship for owning a dog or a rifle, for profiting by insurance provisions and for a number of other rights and privileges which we are accustomed to consider open to all.

It is the essence of justice that no man be deprived of the opportunity to earn his living because of lack of knowledge of

English and citizenship unless every facility be provided for learning these and fitting himself for citizenship. It is, however, true that our schools will remain empty, even with compulsory education laws, as in Massachusetts, that our citizenship preparation and examinations will remain in most instances a political farce, until industries make American citizenship their immediate responsibility.

This done, I think we shall find that we need a second melting pot—the civilian training camp. We have found that the industry creates an immigrant colony, and class and social distinctions. The workmen frequently never meet or shake hands with a "real American." The day's drill, the camp drudgery, washing the dust off alongside a stream, the dog tent, with their magnificent opportunity for formal team work and informal fellowship may supply the melting pot we have missed. They will certainly give back to industry men of greater value as workmen, and to the country incomparably better citizens.

SOME IMPROVEMENTS IN EXISTING TRAINING SYSTEMS

BY J. W. DIETZ,

Manager, Educational Department, Western Electric Company, Chicago, Ill.

"When in doubt blame the public schools." It is a much easier thing to do and one gets so much larger an audience than when we take up the question—"How about our own training systems in business?" The fact that there is already some appreciation of the need of comprehensive training systems in business, is excuse for the prophecy that they will find their definite and proper place.

Of course some still insist that their training work is only temporary because of the failure of this or that agency to furnish the necessary supply of trained employees. But there are others, and we are finding them more frequently in business today who are constructively answering the question—"Is there not now and will there not always be definite training work for business which

will have to be undertaken in business by business people?" They are answering the question by analysis of the needs of their particular organization, then building upon varying individual educational foundations by extending (not duplicating) the efforts of other educational agencies.

No training system will function properly unless it is built upon a clean-cut realization of the particular needs it is designed to meet. Woe be unto the system which exists because "we want to do something nice for our young folks." It sounds well to be able to say "Oh, yes, we have a school"—but is it delivering the goods? A training system is a service department and must be judged by the service it renders to the organization which is paying the bills.

Frankly one of the difficult things in educational work within business is to remember that the product of a "training department" is training just as clearly as that the object of a "sales department" is sales, more sales and better sales. Unless those responsible for the educational work can keep this point of view we can hope for but little real service to an organization. It is possible to keep this point of view and still coöperate with those who are responsible for immediate results in production or distribution.

If we are sure that the desired product is training—real training, more training and better training, then let us look to our machinery—our system. It takes one of rather generous temperament to speak glowingly of existing training systems. There are many existing excellent educational features, methods or experiments in many varied industries and organizations, but there are as yet no "corporation school systems" as there will be in progressive business organizations within the next ten years. It is not too early, however, to expect the experimental, the empirical work of the present to give evidence of a scientific shaping into a definite functional business unit or perhaps even into a recognized part of a more comprehensive educational system.

Existing training plans for employees at work may be broadly divided under four heads when their purposes are considered:

(1) To teach a particular task.

Typical cases are the training of operators for one machine in a works in which there is a minute division of

labor, or the office worker, such as a filing clerk, involving a short series of closely related duties.

(2) To teach a trade.

The training of apprentices as of machinists or printers.

(3) To teach a business as a whole.

Where it is essential for those who are to accept responsibility in the direction of a business to have a broad knowledge of that business, its products, its methods, its markets, its policies and its personnel.

(4) To teach subjects related to a task, a trade or a business.

Largely an opportunity for voluntary study as an aid in increasing present efficiency and preparation for advancement.

GENERAL IMPROVEMENTS

Let us consider a number of fundamentals applicable to any of the foregoing four needs, all of which, or any one of which may be the urgent present educational need of a business.

1. *Organization and Administration Problems Are of Prime Importance*

If they are fairly met at the beginning many subsequent problems are much more likely to be correctly solved. The fixing of definite responsibility for this sort of work pays as big returns as does similiar definiteness in other phases of business. It is entirely too optimistic to hope for results by delegating supervision over educational work to one who is already busy on "regular work." The temptation to let things slide under the pressure of more tangible work is a real handicap. Not until an organization recognizes its training work on a par with other activities will it get real results. Arrangements for advisory council are essential to success, but it is better to have one man give his full time and his best thought and energy to the educational supervision problems of an organization than to have ten men giving a tenth of their time.

This carries with it too the recommendation that such a work be dignified by an organization unit title, which means its finances

should be handled as are those of any similar unit. This means at once that the work is established to get results.

Plans and records become a definite part of the system and no permanent success can be hoped for without them. It is essentially a long-time investment, and records are vital to the measuring of the returns as well as development of the plan. How else can we make a conscientious study of our mistakes?

2. *Selection of Students*

Without question the most vital single item (and the one in which there is room for definite improvement) is the securing of the right employees to train. Every step toward more definite training is a step toward more careful selection of employees. Here is a splendid opportunity for coöperation between the employment department and the educational department in the case of new people coming into organization or between the educational department and other operating departments when old employees are to be developed. Here again, the keeping of adequate records and using them is of utmost importance. Study of known successful employees is going to be our safest guide for the selection of new employees. No educational plans, however well organized or administered, can be successful without the right sort of human material to be developed. Many present difficult problems will automatically solve themselves when we give proper attention to this part of our problem.

3. *Educational Methods*

Knowing as we all do the great variations in native ability, as well as previous educational opportunity, we have been either careless or too optimistic in some of our plans. We still insist too much upon forcing our people to fit our plans rather than taking the pains and thought to make our plans flexible enough to fit the various needs of our people and our organizations.

Not until from most careful analysis and study we have set certain standards of achievement can we free much of our present training work of the element of time serving. Closer supervision and more intensive instruction are going to show us when we have achieved the results we are striving for, and at the same time point out the futility of mere time serving as an educational tool.

We need to know more about what to expect from certain

educational methods. We need to choose the method to fit the result expected. We are too careless in checking results. We hope, for instance, that our people get certain information through lectures, but if we check results we are almost certain to be disappointed. We need to be much more critical of our methods if we expect results from an educational viewpoint. Concrete problems and laboratory methods are much more worthy of our faith.

SOME SPECIFIC IMPROVEMENTS

1. *In Teaching a Particular Task*

No task, however trivial, is so unimportant that it is not worthy of thought and attention from the standpoint of instruction. In the smaller organization the danger is from the feeling that the number of people to be trained is small; therefore, its importance is underestimated. In the large organization there is such a great variety that the temptation is to feel that to make an attempt to instruct all new people is hopeless.

We must bear in mind the point that now we are expecting all new employees to learn their tasks practically without assistance. This is expensive, but how expensive and wasteful of time, material and effort can only be shown in comparison in concrete cases where better methods are used.

Where from six to fifteen new employees are being trained on fairly similar work, a full-time instructor can prove enough in savings to warrant his appointment. The instructor is responsible for the formation of proper work habits from the start. He discovers inaptitude or fitness for the task. He teaches some resourcefulness without the expensive wastes of the unsupervised method. He arouses interest in relation of a particular task to the work as a whole. He overcomes the hesitancy of the average new employee in asking for help. Working new people in groups tends to avoid discouragement on account of comparison of results with experienced workers before proper time has elapsed to gain proficiency.

Whether you have one or a hundred employees to "break in," definite decision as to the distinct ends to be accomplished and a record of the plan tried in their accomplishment will prove worth while.

2. *In Teaching a Trade*

The old plan of teaching a trade where the journeyman or foreman was considered responsible for instructing the apprentice, was simply a continuation or repetition of the indefinite plan of permitting people to learn a single task. It was always assumed that the period served would give the variety of experience.

There has been some tendency to swing entirely away from the old plan into a full time instruction shop, and there are a number of apprentice plans being worked on this basis at present. It was a natural conclusion to reach after so universal discouragement over the old method to meet present conditions.

The plan which at present gives greatest promise of results is one in which full responsibility is still given to the apprentice training department and they are held responsible alike for the initial instruction on particular tasks or machines, for experience in regular departments under normal shop conditions (as opposed to full time in a separate instruction shop) and for such related study as is considered necessary.

It seems fair to expect the most improvement in apprentice plans along this line. Some obvious advantages are the reduction in the amount of equipment in the school shop. The variety of equipment is necessary, but duplication is not necessary for the sole purpose of having equipment available upon which to practice to gain speed. A larger number of apprentices can be handled with a given investment in instruction equipment. A very close correlation between practice and study is possible. The alternate assignments throughout the course giving, first, school shop experience, and then the regular shop experience, will give the best knowledge of actual work problems and contact with workmen.

The full authority of the apprentice supervisor will give the opportunity to select productive work of the most value educationally.

3. *In Teaching a Business as a Whole*

More and more emphasis is being placed on the furnishing and placing of apprentices to gain a broader knowledge of a business than can be gained from experience in single department, or even a group of departments.

Offering a variety of experiences will aid in increasing the versatility of employees as well as their breadth. We can look for the biggest improvement when we study and analyze the experience to discover the best order of assignment. What seems the most logical from the standpoint of organization of the business, will not necessarily prove the ideal arrangement from an educational point of view.

It has been proven that it is much better to teach and give experience in assembly departments before assignment to work in process departments where work is done on isolated parts. The attempt to have a new employee, who has no general knowledge of your product, follow the process through from raw material to finished product, will prove expensive in time as opposed to the plan for acquiring the more general knowledge first.

In every organization there is much material already accumulated which, if made accessible and organized into a plan, may be made a productive force rather than an encumbrance to a file of records or correspondence. Starting with a company's own advertising matter a course of related study can be built up which will prove of value to the progressive employees who are interested in broadening.

A method which is coming into use is that of taking old employees from their regular duties and giving them instruction in groups on phases of the business which are related and considered essential to the best coöperation and results. Plans which are laid on strictly an educational basis with definite programs for every part of the work will bring results which often justify taking employees from their regular work for periods as long as six or eight weeks.

Definite intensive instruction with close checking of work done will pay as big returns with experienced and older employees as does similar effort with new people.

There are in every business certain fundamental things which it would be to the organization's advantage to have many of its employees know. There must be as definite plans to teach this general knowledge as the more specific knowledge of detailed tasks or trades.

4. *In Teaching Related Subjects*

In every business there are certain related subjects which are real working tools. Mechanical drawing for the ability it gives to read blueprints is almost a universal shop demand. Electricity and magnetism reaches very intimately into many businesses.

The big opportunity within business is to take these fundamentals, use concrete illustrations and problems from your own business and help your people to see how those fundamentals are interpreted in their every-day work. There are people in every organization anxious to fit themselves for advancement within a business by such study. The by-products of such a plan are large. The pupils profit, the instructors are better for it and the organization has discovered its progressive employees.

What May We Expect?

While better and more progressive efforts in our training plans for employees are not the panacea for all industrial ills, we may with confidence expect some very definite results.

They will show us both the cost and the value of systematic training and development of employees in business.

They will stimulate and aid efforts for the more careful analysis of work and employees for that work.

They will serve as a point of contact between public and corporative interests in all grades of education.

They will be a distinct factor in the reduction of "turn over."

They will serve as a most important factor in the advancement of democracy in industry.

RECORDS AND REPORTS OF WORK

By J. W. Bancker,

Assistant General Superintendent, Western Electric Company, Chicago.

During the past few years the application of scientific analysis to the problem of industrial management has occupied the attention of many companies. This analysis has been largely directed to the solution of the problem as it was affected by the factors of materials, processes and equipment and while it has been recognized that the study of the human element is at least as important as the other elements involved, comparatively little analysis of this factor has been attempted in comparison with the thought and study directed to the others. It is evident from the articles written in the last two or three years and from the general interest now apparent that considerable thought is being given to the man problem and it is hoped that the description of employment methods and records which follows may be of assistance to those interested.

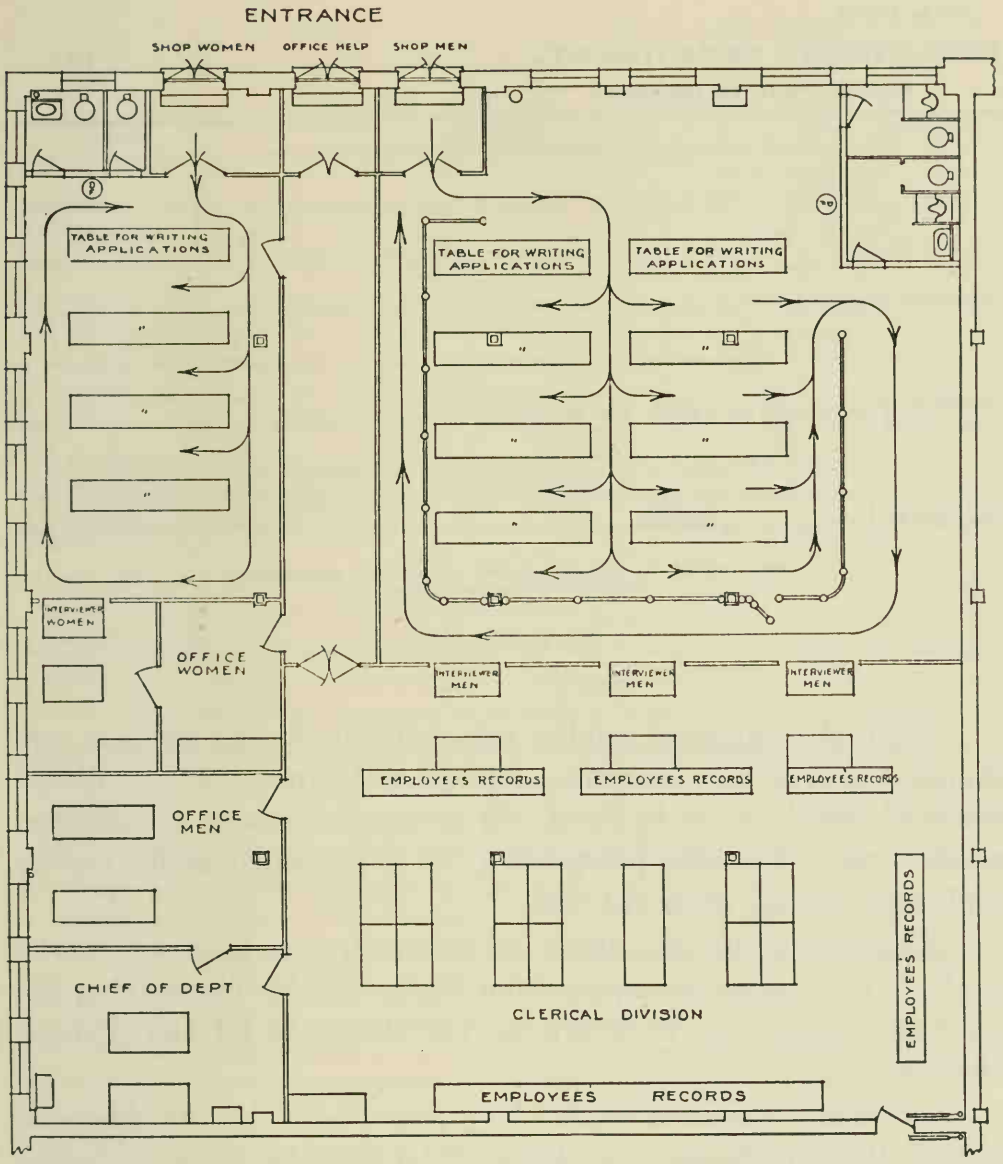
As many of the records of employes at work are those originated at the time of employment, it has seemed advisable to explain somewhat in detail the employment routine. While there are some minor differences between the methods and in the forms used in employing shop employes and office employes, for the sake of simplicity, this description will cover the methods and forms used in the employment of shop employes only.

It was considered advisable in laying out the employment department to divide the applicants into four main divisions: shop men, shop women, office men and office women, and the layout of this department which follows shows how the arrangement of the department accomplishes the separation desired and also indicates the line of travel for each class of applicant.

Records

The Hiring of Employes

When additional help is required by any department, a requisition, form 256 GN, is sent by the department chief to the employment department.



EMPLOYMENT DEPT.
WESTERN ELECTRIC Co. INC.

FLOOR PLAN

As rapidly as these forms are received they are sorted according to the general divisions specified above and added to lists which show the requirements of the works for each class of help. These lists are placed in the hands of the interviewers who are thereby informed as to the total requirements of the works for each class of help.

256 GN (11-16)

EMPLOYMENT DEPARTMENT _____ 191__

PROVIDE HELP AS FOLLOWS:

NUMBER	KIND	RATE

VACANCY CAUSED BY _____

_____

TEMPORARY / PERMANENT } INCREASE IN FORCE ON ACCOUNT OF _____

_____

APPROVED } _____ SIGNED _____ SEC. ____ FLOOR____

THIS COUPON TO BE SENT TO THE EMPLOYMENT DEPARTMENT WHEN PROPERLY APPROVED

FORM 256 GN

When the applicant applies personally he is first given a preliminary interview to determine his general fitness for any of the positions which are to be filled. If he seems to meet the requirements or is a desirable prospective, he is requested to fill out an application blank, form 213 GN.

After filling out this blank he returns to the interviewer who carefully scrutinizes the application blank and by questioning the applicants endeavors to determine his ability to fill the position which is vacant.

On certain classes of skilled help it has been thought desirable to have the department head finally interview the applicant before assigning him to the position vacant and in these cases the applicant is sent to the department head with the application blank and form H. W. 1255 enclosed in the pass envelope, form H. W. 1405.

By means of this pass envelope the applicant can be properly directed to the department by the police officers of the works. If the applicant is satisfactory to the department head he so indicates it on form H. W. 1255 and returns the applicant to the employment department with both forms in a sealed envelope. The approved applicant is then given a pass, form H. W. 87

Western Electric Company,
INCORPORATED

APPLICATION FOR EMPLOYMENT

DATE _____ 191__

NAME IN FULL _____ NATIONALITY _____
(NO INITIALS PERMITTED)

ADDRESS _____ TELEPHONE NO. _____

PLACE OF BIRTH _____ DATE OF BIRTH _____ MARRIED? _____
(MONTH, DAY AND YEAR)

NAME OF SCHOOL _____ FROM _____ TO _____ DID YOU GRADUATE? _____

NAME OF HIGH SCHOOL _____ FROM _____ TO _____ DID YOU GRADUATE? _____

OTHER EDUCATION OR TRAINING _____

KIND OF WORK WANTED _____

HAVE YOU ANY PHYSICAL DEFECTS? _____ AMOUNT OF WAGES OR SALARY EXPECTED? _____

FORMER EMPLOYERS

GIVE THE NAMES OF THE FIRMS YOU HAVE WORKED FOR BEGINNING WITH THE LAST	WHAT WORK DID YOU DO	HOW LONG EMPLOYED?	DATE OF LEAVING?	WHAT WAGES OR SALARY DID YOU RECEIVE?
1. LAST EMPLOYER				
NAME				
ADDRESS				
WHY DID YOU LEAVE?				
2. NAME				
ADDRESS				
WHY DID YOU LEAVE?				
3. NAME				
ADDRESS				
WHY DID YOU LEAVE?				
4. NAME				
ADDRESS				
WHY DID YOU LEAVE?				

HAVE YOU EVER BEEN EMPLOYED BY ANY TELEPHONE COMPANY _____

IF SO GIVE ITS NAME AND ADDRESS _____

DATE OF ENTERING ITS SERVICE _____ DATE OF LEAVING ITS SERVICE _____

HAVE YOU EVER BEEN EMPLOYED BY THE WESTERN ELECTRIC COMPANY? _____ IF SO, WHEN? _____

HAVE YOU ANY RELATIVES IN THE EMPLOY OF THIS COMPANY _____ IF SO, GIVE NAMES? _____

INTRODUCED TO THIS COMPANY BY _____

REFERENCES (DO NOT REFER TO RELATIVES)

NAME	ADDRESS	BUSINESS

DATE ASSIGNED _____ DEPARTMENT _____ RATE _____

VACANCY, INCREASE, TEMPORARY, PERIOD EXPIRES _____

213 GN
(2-16)

READ RULES ON OTHER SIDE

FORM 213 GN

H. W. 1255

WESTERN ELECTRIC COMPANY, INCORPORATED

MR _____ DEPT. NO. _____ DATE _____

THE BEARER, _____ IS SENT IN RESPONSE

TO YOUR REQUISITION FOR _____

_____

PLEASE FILL OUT BLANK, AS INDICATED, AND RETURN TO EMPLOYMENT DEPARTMENT WITH APPLICANT.

EMPLOYMENT DEPARTMENT, PER _____

TO EMPLOYMENT DEPARTMENT:—(ENCLOSE IN SEALED ENVELOPE)

APPLICANT ACCEPTED AT _____ PER { HOUR / WEEK } TO REPORT FOR WORK (DATE) _____

THIS ADDITION IS DUE TO { VACANCY / PERMANENT INCREASE / TEMPORARY INCREASE } IN DEPT. NO. _____ (ON WHICH PAY ROLL HE OR SHE SHOULD BE ENTERED)

APPLICANT REJECTED ON ACCOUNT OF _____

_____

DEPT. NO. _____ PER _____

FORM H. W. 1255

and sent to the medical department where he is examined as to his physical fitness and a complete record of the physical conditions found is entered on form H. W. 3051 which is filed permanently in the medical department.

H. W. 1405

APPROVED _____

WESTERN ELECTRIC COMPANY, INCORPORATED
EMPLOYMENT DEPT.

DATE _____

PASS BEARER TO

MR. _____ DEPT. NO. _____

MR. _____ DEPT. NO. _____

MR. _____ DEPT. NO. _____

MR _____ DEPT. NO. _____

FORM H. W. 1405

H W 87

APPLICANTS PASS TO MEDICAL DEPT.

NAME _____ DEPT. _____

SENT TO MEDICAL DEPT. FOR PHYSICAL EXAMINATION

_____
DEPT. 1310

_____
SIGNATURE OF APPLICANT

REPORT _____ _____
EXAMINING PHYSICIAN

FORM H. W. 87

The applicant is then sent back to the employment department with pass H. W. 87, indicating whether or not he has satisfactorily passed our physical requirements. If he has he is then given the pass coupon of form H. W. 5243, which specifies the date and the time on which he is to report to work.

H W 3051-A

PHYSICAL EXAMINATION—MEN

NAME			CLOCK NO.	DEPT. NO.
ADDRESS			MARRIED SINGLE	AGE
NATIONALITY	OCCUPATION	DATE EMPLOYED	DATE EXAMINED	REFERRED BY

WHAT DISEASES HAVE YOU HAD?

NATURE	DATE	DURATION	COMPLICATIONS

WHAT INJURIES, ACCIDENTS OR SURGICAL OPERATIONS HAVE YOU HAD?

NATURE	DATE	DURATION	RESULTS

HAVE YOU EVER HAD:

HERNIA	RHEUMATISM	FISTULA	VENEREAL DISEASE

SIGNED _____

HEIGHT	WEIGHT	TEMPERATURE	INSPECTION & PALPATION OF HEAD & NECK	
TONGUE	TEETH	GUMS	THROAT	NASAL PASSAGES

FORM H. W. 3051-A

VISION RIGHT	LEFT	COLOR BLIND	WEAR GLASSES	HEARING RIGHT	LEFT

LUNGS AUSCULTATION	PERCUSSION

HEART SOUNDS	RHYTHM	SIZE	BLOOD PRESSURE SYSTOLIC	DIASTOLIC	PULSE PRESSURE

PULSE CHARACTER OF	CONDITION OF ARTERIES	INGUINAL OR FEMORAL HERNIA	CONDITION OF INGUINAL RINGS

GENITO URINARY SYSTEM VARICOCELE	HYDROCELE	VARICOSE VEINS

CONDITION OF ABDOMINAL VISCERA	EXTREMETIES	JOINTS

URINALYSIS	SPEC. GRAVITY	ALBUMEN	SUGAR	SEDIMENT	MICROSCOPIC

PUPILS	TREMORS	STELLWAG GRAEF'S ROMBERG	SPINE	GLANDS	REFLEXES

SCARS OR DEFORMITIES FROM OPERATION, INJURY OR DISEASE

EVIDENCE OF INFECTIOUS DISEASE	ACCEPTED	PHYSICALLY UNFIT	REJECTED

WHY_____

SIGNED_____
EXAMINING PHYSICIAN

FORM H. W. 3051–A

H W 5243-A (2-14)

NEW EMPLOYEE'S PASS

WATCHMAN, PASS

CLOCK NO.	NAME

TO DEPT. NO.	FLOOR	SECTION	NAME OF FOREMAN

TO REPORT (DATE)	A.M. / P.M.	EMPLOYMENT DEPARTMENT

REPORTED A.M. P.M.	DATE	WATCHMAN

NOTED EMPLOYMENT DEPARTMENT	NOTED PAY ROLL DEPARTMENT

EMPLOYMENT APPROVED

EXAMINING PHYSICIAN

PASSES BEARER TO DEPARTMENT INDICATED IF PRESENTED ON THE DATE SPECIFIED. TO BE SURRENDERED TO THE FOREMAN'S CLERK IN EXCHANGE FOR EMPLOYEE'S ENTRANCE CARD, THEN FORWARDED TO THE EMPLOYMENT DEPT. NO. 1056

FORM H. W. 5243–A

H W 5243-B

NOTIFICATION OF NEW EMPLOYEE

CLOCK NO.	NAME		
TO DEPT. NO.	FLOOR	SECTION	NAME OF FOREMAN
TO REPORT (DATE)	A.M. / P.M.		EMPLOYMENT DEPARTMENT

CLASS OF LABOR (USE STANDARD CLASSIFICATIONS PER INSTR. A-3-B)

RATE OF PAY _____ PER _____ VACANCY / INCREASE / TEMPORARY

SIGNED _____ FOREMAN

FOR HOURLY RATES:—RATE SHALL BE DETERMINED AND THIS FORM FORWARDED TO EMPLOYMENT DEPARTMENT AS SOON AS POSSIBLE, IN NO CASE LATER THAN FOURTH WORKING DAY PRIOR TO PAY DAY.

FOR WEEKLY RATES:—THIS FORM SHALL BE FORWARDED TO PAY ROLL DEPARTMENT BY SPECIAL MESSENGER AS SOON AS EMPLOYEE STARTS WORK.

FORM H. W. 5243–B

He is also given in pamphlet form copies of the shop rules and the benefit fund plan. The second coupon of form H. W. 5243 is sent by the employment department to the department head to whom the new employe is to report, together with an employe's entrance card, form H. W. 1501 and identification card, form H. W. 411.

NO EMPLOYEE WILL BE ALLOWED TO ENTER THE FACTORY WITHOUT SHOWING HIS CARD.

WESTERN ELECTRIC COMPANY.

INCORPORATED

EMPLOYEE'S CARD.

NAME.....

CLOCK NO. ..... DEPT. NO.....

SIGNED .....

FOREMAN.

FORM H. W. 1501–A

HW 1501-A (1-18)

EVERY TIME AN EMPLOYEE COMES IN OR GOES OUT HE MUST REGISTER ON THE CLOCK. AT NOON EVERY ONE MUST REGISTER "OUT" WITHIN 15 MINUTES AFTER STOPPING TIME AND "IN" NOT EARLIER THAN 30 MINUTES AFTER STOPPING TIME.

FOR EACH FAILURE TO REGISTER, A DEDUCTION OF ONE-HALF HOUR WILL BE MADE FROM EMPLOYEE'S TIME.

ANY EMPLOYEE LOANING HIS CARD TO, OR REGISTERING FOR ANOTHER, WILL BE SUBJECT TO IMMEDIATE DISCHARGE.

THIS CARD MUST BE RETURNED TO THE PAY ROLL DEPARTMENT WHEN FINAL PAY IS DRAWN.

IF THIS CARD IS LOST, TWENTY-FIVE (25) CENTS WILL BE DEDUCTED FROM WAGES DUE.

SIGNED.....
EMPLOYEE.

FORM H. W. 1501–A

When the new employe reports for duty he presents the pass to the police officer who directs him to the department to which he has been assigned. Upon arrival in that department he reports to the department clerk who assigns him a clock number, gives him the entrance card, witnesses his signature on the identification card, provides him with locker space and then turns him over to the foreman or his assistant for assignment to work. The department clerk then forwards form H. W. 5243 to the pay roll department as a notification that the new employe has reported and has been assigned to work.

H W 411 (KR-27)

EMPLOYEE'S IDENTIFICATION CARD

THIS LINE FOR USE OF EMPLOYMENT DEPARTMENT ONLY

SIGNATURE	CLOCK NO. ASSIGNED
DATE OF BIRTH	BIRTHPLACE
DATE REPORTED FOR WORK	SIGNATURE WITNESSED DEPT. NO.
	SIGNATURE AND OTHER DATA COMPARED EMPLOYMENT DEPT.

REMARKS

THIS FORM MUST BE SENT TO THE EMPLOYMENT DEPARTMENT AS SOON AS NEW EMPLOYEE REPORTS FOR WORK

FORM H. W. 411

Within four days the department head enters on the second coupon of form H. W. 5243 the new employe's rate of pay (which must be within standard rates set for the class of work to which he is assigned), signs it and sends it, together with the identification cards, form H. W. 411, to the employment department. The employment department, from the information on the application blank and form H. W. 5243 received from the department head, makes out an employe's rate card,

H W 9 (6-13)

NAME (IN FULL) DATE OF BIRTH (MONTH, DAY AND YEAR)

NATIONALITY | ADDRESS (INST. BRANCH ONLY)

MARRIED ☐ SINGLE ☐ VACANCY ☐ INCREASE ☐ TEMPORARY. EXPIRES

ENTERED ON PAY ROLL	CLOCK NO.	DEPARTMENT		DATE	RATE	APPROVED
		NAME	NO.			

FORM H. W. 9–A

ENTERED ON PAY ROLL	CLOCK NO.	DEPARTMENT		DATE	RATE	APPROVED
		NAME	NO.			

FORM H. W. 9–B

form H. W. 9, which after being approved, in accordance with certain prescribed instructions, is sent to the pay roll department as a notification to enter the new employe on the pay roll. The employment department checks the signature on the identification card with that on the application blank, forwarding the identification card to the cashier to be used in checking the signatures on pay receipts and sends out inquiries to the references given by the new employe on his application blank. The replies to these inquiries, the application blank, form H. W. 5243, medical department pass, and interview slip, form H. W. 1255, when it is used, are then filed

permanently in employe's folder, form 412 GN, on which is noted the employe's name, department number and employment date.

Form 412 G N

NAME

DATE EMPLOYED	DEPARTMENT	DATE OF LEAVING

FORM 412 G. N.

This folder is then filed alphabetically.

Employment records are held indefinitely and in the employment department are filed folders for all employes hired for the past five years, those for employes hired prior to that time being filed in a general record room.

As soon as an employe has been assigned to work the department clerk originates record of attendance and earnings card, form H. W. 135, to which is posted each day the number of hours worked, it being indicated each day by means of a symbol whether or not the employe was late. At the end of the week the totals of the number of times late, the day work hours and piece work hours worked are entered, together with a record of the employe's pay which is obtained from the pay receipt.

This is one of the most important records which we keep, showing as it does a complete record of the employe's punctuality, attendance and earnings, also showing his average and minimum earnings per hour for each month and for the six months' period. The data obtained from these cards is used at the semi-annual revision periods later referred to and is used continually by department heads and their superiors in watching the progress of the operators as indicated by their earnings.

When the cards have been completely filled they are forwarded to the employment department and filed in the employe's folder with the other papers, a new card being started by the department clerk for the subsequent period.

H. W. 135 B. 16-131

RECORD OF ATTENDANCE AND EARNINGS OF HOURLY RATE EMPLOYEES.—(MALE)

CLOCK NO. | NAME | CLASS OF WORK | RATE | PER HOUR | PER WEEK | SPEC. RATE | DEPT. NO.

DATE		S	M	T	W	T	F	S	TIMES LATE	TOTAL D. & HOURS	TOTAL P. & HOURS	TOTAL HOURS	PAY RECEIVED
1916 OCT. 9	W												
	O												
	R												*
16	W												
	O												
	R												*
23	W												
	O												
	R												*
30	W												
	O												
	R												*
RATE PER P.W. HOUR	AV. MIN.				OCT. TOTALS		P.W. PAY REC'D *						
NOV. 6	W												
	O												
	R												*
13	W												
	O												
	R												*
20	W												
	O												
	R												*
27	W												
	O												
	R												*
RATE PER P.W. HOUR	AV. MIN.				NOV. TOTALS		P.W. PAY REC'D *						
DEC. 4	W												
	O												
	R												*
11	W												
	O												
	R												*
18	W												
	O												
	R												*
25	W												
	O												
	R												*
1916 JAN. 1	W												
	O												
	R												*
RATE PER P.W. HOUR	AV. MIN.				DEC. TOTALS		P.W. PAY REC'D *						

DATE		S	M	T	W	T	F	S	TIMES LATE	TOTAL D. & HOURS	TOTAL P. & HOURS	TOTAL HOURS	PAY RECEIVED
1916 JAN. 8	W												
	O												
	R												*
15	W												
	O												
	R												*
22	W												
	O												
	R												*
29	W												
	O												
	R												*
RATE PER P.W. HOUR	AV. MIN.				JAN. TOTALS		P.W. PAY REC'D *						
FEB. 5	W												
	O												
	R												*
12	W												
	O												
	R												*
19	W												
	O												
	R												*
26	W												
	O												
	R												*
RATE PER P.W. HOUR	AV. MIN.				FEB. TOTALS		P.W. PAY REC'D *						
MAR. 4	W												
	O												
	R												*
11	W												
	O												
	R												*
18	W												
	O												
	R												*
25	W												
	O												
	R												*
APR. 1	W												
	O												
	R												*
RATE PER P.W. HOUR	AV. MIN.				MAR. TOTALS		P.W. PAY REC'D *						
RATE PER P.W. HOUR FOR 6 MOS.	AV. MIN.						TOTALS FOR SIX MONTHS						

* P. W. EARNINGS ENTER IN RED

WHEN CLASS OF WORK DIFFERS FROM THAT ALREADY DESIGNATED MAKE ENTRIES IN SPACES OPPOSITE "O" OR "R"

W - ACTUAL HOURS WORKED IN DEPARTMENT
O - OVERTIME ALLOWANCE IN HOURS
R - HOURS WORKED IN RESTAURANT, BAND ETC. SEE INSTR. NO. 30-12

FORM H. W. 135–A

EMPLOYE'S LEAVING NOTICE (REVERSE SIDE)

WEEK ENDING_____

HOURS D. W._____ CHECKED BY_____ AMOUNT_____ CHECKED BY_____

" P. W._____ " " _____ " _____ " " _____

TOTAL AMOUNT_____

WEEK ENDING_____

HOURS D. W._____ CHECKED BY_____ AMOUNT_____ CHECKED BY_____

" P. W._____ " " _____ " _____ " " _____

RATE PER HOUR_____ TOTAL AMOUNT_____

FORM 421

Record of Company Property Loaned

For all company property loaned to employes for their use, such as keys, badges, tools, books, etc., record of company property loaned, form H. W. 5099, is made out and signed by the person receiving the property. This card is filed in the pay roll department, and in the event of employe leaving, payment of final wages will not be made until all of this property has been returned and accounted for.

H. W. 5099 (5-14)

RECORD OF COMPANY PROPERTY LOANED

USE SEPARATE CARD FOR EACH ITEM LOANED

DATE	NAME	CLOCK NO.	DEPT. NO.

CLASS OF BADGE | BADGE NO. | REQ. NO.

KIND OF KEY | KEY NO | SET

MISCELLANEOUS ITEMS

IF THE ABOVE PROPERTY IS LOST OR CANNOT BE PRODUCED UPON DEMAND, I HEREBY AUTHORIZE THE WESTERN ELECTRIC COMPANY TO DEDUCT FROM MY WAGES THE SUM OF

$_____ SIGNED _____

FORM H. W. 5099

Transfer of Employes between Departments

When it is desirable for any reason to transfer an employe from one department to another the head of the department in which the employe works originates form H. W. 2214.

Coupon B of this form is sent immediately to the pay roll department as a preliminary notice that the transfer has been made and is held there as a check against the receipt of coupon A. The A coupon of this form is approved first by the department head making the transfer, then by the head of the department to which the employe is being transferred and finally by the superior of both department heads. It is then sent to the pay roll department where the necessary changes are made on the pay roll, after which it

is sent to the employment department and filed in the employe's folder.

H W 2214-A (1-16)

RECORD OF TRANSFER OF EMPLOYEE

NAME	DATE OF TRANSFER
REASON FOR TRANSFER	

	DEPT. NO.	CLOCK NO.	RATE
FROM			
TO			

VACANCY OR TRANSFER OF WORK ☐ INCREASE ☐

TEMPORARY TRANSFER

EXPIRES

CHARACTER OF SERVICE	GOOD	FAIR	UNSATISF'Y
WORK			
CONDUCT			
ABILITY			

WOULD YOU RE-EMPLOY?

CLASS OF WORK

SIGNED

DEPT. NO.

APPROVED

SECURE APPROVALS IN ACCORDANCE WITH G.M.I. 30.111 AND FORWARD AT ONCE UNDER COVER TO PAY ROLL DEPARTMENT NO. 5039

H W 2214-B (1-16)

PRELIMINARY TRANSFER NOTICE-PAY ROLL RECORD

CLOCK NO.	NAME	
FROM DEPT. NO.	TO DEPT. NO.	DATE OF TRANSFER

SIGNED

DEPT. NO.

H. W. 2214-A RECEIVED IN PAY ROLL DEPT.		PAY ROLL RECORDS CHANGED	
DATE	HOUR	DATE	PAY ROLL CLERK
COMPANY PROPERTY FILE CHECKED		H. W. 2214-A SENT TO EMPLOYMENT DEPT.	
DATE	PAY ROLL CLERK	DATE	PAY ROLL CLERK

THIS PART TO BE SENT AT ONCE TO PAY ROLL DEPARTMENT NO. 5039 WHERE IT SHALL BE HELD UNTIL RECEIPT OF H. W. 2214-A

FORM H. W. 2214–A AND B

Re-rating Employes

In order that the rates of employes may be maintained in accordance with the kind and quality of work performed by them or changed when their position or general class of work is changed, two methods are provided. By the first method the rate of pay

of every employe is considered at fixed semi-annual periods. The names are listed on form H. W. 304 which is self-explanatory and on which department heads make their recommendations for changes in rates.

HW 304-C (12-15)

SALARY PAY ROLL RATE REVISION SHEETS

DEPARTMENT NO. (SHEETS) JANUARY 8, 1916

(1) MR.

FOLLOWING IS A LIST OF SALARIED EMPLOYEES WHO REPORTED TO YOU ON THE ABOVE DATE. RECOMMEND SUCH CHANGES IN PAY AS YOU CONSIDER JUSTIFIED. INCREASES TO TAKE EFFECT APRIL 2, 1916; DECREASES APRIL 30, 1916. NOTE CAREFULLY THE RULES GIVEN IN INSTRUCTION NO. 30.132. ERRORS ON, AND OMISSIONS FROM LIST MUST BE IMMEDIATELY REPORTED TO THE CHIEF OF THE PAY ROLL DEPARMENT. FOR TRANSFERS FROM ONE DEPARTMENT TO ANOTHER AFTER JANUARY 8, 1916. NO CHANGE IS TO BE MADE ON LIST, BUT RECOMMENDATIONS MUST BE APPROVED BY THE CHIEFS OF THE DEPARTMENTS LEFT AND ENTERED.

MUST REACH	(2) CHIEF OF DIVISION, NO.	BY JANUARY, 28, 1916
	(3) CHIEF OF BRANCH; NO.	BY FEBRUARY 1, 1916
	(4) ASST. GENL. SUPERINTENDENT, NO.	BY FEBRUARY 5, 1916
	(5) CHIEF OF ACCOUNTING DIVISION, NO. 5025	BY FEBRUARY 12, 1916
	(6) GENERAL SUPERINTENDENT, NO. 5001	BY FEBRUARY 18, 1916

NAME	CLASS OF WORK	AGE	PER CENT REGULAR HOURS PRESENT	CONTIN'US SERVICE FROM MO. YR.	DATE LAST CHANGE IN PAY MO. YR.	PREVIOUS RATE	PRESENT RATE	RATE RECOM-MENDED (CHECK THUS "—" FOR "NO CHANGE")	NOTES

ABOVE CHANGES RECOMMENDED

CHIEF OF DEPARTMENT. CHIEF OF DIVISION CHIEF OF BRANCH ASST. GENL. SUPERINTENDENT GENERAL SUPERINTENDENT

THIS IS TO CERTIFY THAT ABOVE RATES (CHANGED AND UNCHANGED) AGREE WITH THOSE ON ORIGINAL SHEETS APPROVED IN ACCORDANCE WITH C. I. 3 (C. M. I. 30. 132).

AUDITOR

FORM H. W. 304

After these recommendations have received the prescribed approvals, the lists are sent to the pay roll department who make the authorized changes on the pay roll. At this periodic revision the employe's record is carefully considered, it being required of the department head that he give good reasons, not only for such increases as are recommended, but also for not recommending increases in those cases where the rate has remained stationary for any length of time.

Under certain conditions it is necessary to re-rate employes at other than the regular revision periods and for this purpose, a re-rating card, form H. W. 5286 has been provided.

Such a re-rating is authorized in the case of a new employe when it is found that the starting rate is too low for the grade of work performed. In these cases a re-rating may be made within sixty days after date of hiring. A re-rating is also authorized in cases where an employe is changed from one class of work to another for

H. W. 5286-A (1-16)

RE-RATING REQUISITION

EMPLOYMENT DEPARTMENT No. 5533			DATE 191
PLEASE RE-RATE			
CLOCK No.	NAME		
FROM PER	TO PER	DATE EMPLOYED	NEW RATE TO DATE FROM 191
REASON			
SIGNED FOREMAN			DEPT. No
APPROVED	APPROVED	APPROVED	APPROVED

FOREMEN OR CHIEFS OF DEPARTMENTS SHALL SECURE APPROVALS AND FORWARD AT ONCE TO DEPARTMENT NO. 5533 IN ACCORDANCE WITH G. M. I. 30.192.

FORM H. W. 5286–A

which the rate paid is different from that on which he has been working. This form is originated by the department head who sends the original to the employment department, retaining the duplicate as his record. The employment department obtains the employe's rate card from the pay roll department, inserts the new rate, obtains the necessary approvals, returns the rate card to the pay roll department and files the re-rating form in the employe's folder.

Employes Leaving the Service of the Company

When an employe wishes to leave of his own accord, or is to be laid off due to lack of work in his department, or is to be dismissed for inability to perform the work assigned to him, he is referred to the employment department for an interview. If it is found to be advisable to give him employment at other work for which there is a vacancy, arrangements are made for a regular transfer. If there is no other work available a record card is filled out by the interviewer giving the employe's name, address, department number and class of work. These are filed in the employment department and are used as preferred record of applicants in filling subsequent vacancies. If the employe cannot be used in any other department or is being dismissed for disciplinary reasons, the department head originates employe's leaving notice, form H. W. 421.

H.W. 421

EX-EMPLOYEE'S RECORD

TO EMPLOYMENT DEPT. NO.	DATE	LAST DAY WORKED

CLOCK NO.	NAME

ADDRESS

REASON FOR LEAVING		CHARACTER OF SERVICE				REINSTATEMENT	
LEAVE OF ABSENCE			GOOD	FAIR	UNSATISF'Y	NO OBJECTION	
LAID OFF		WORK				DO NOT RE-EMPLOY FOR THIS DEPT. (FOR REASONS GIVEN BELOW)	
OWN ACCORD		CONDUCT					
SUSPENDED		ABILITY					
DISMISSED / DISCHARGED		CLASS OF WORK PERFORMED					

REMARKS (GIVE COMPLETE INFORMATION CONCERNING REASON FOR LEAVING)

SIGNED_____ FOREMAN, DEPT. NO._____

THIS COUPON MUST BE DETACHED BY THE FOREMAN OR HEAD OF DEPARTMENT AND SENT AT ONCE UNDER COVER TO THE EMPLOYMENT DEPARTMENT

EMPLOYEE'S LEAVING NOTICE

TO PAY ROLL DEPT NO.	TO CASHIER NO.	DATE	LAST DAY WORKED

USE THE FOLLOWING INFORMATION FOR CLOSING THE ACCOUNT OF:—

CLOCK NO.	NAME

ADDRESS

TOOL STOCKKEEPER

TOOLS RETURNED _____

TOOLS DEDUCT FOR _____

BADGE RETURNED	LOCKER KEY RETURNED	DOOR KEY RETURNED

PAY EMPLOYEE AT ONCE | ON REG. PAY DAY

_____ FOREMAN, DEPT. NO._____

ACCOUNT CLOSED DATE	PAY ROLL CLERK	DROPPED FROM ROLL DATE	PAY ROLL CLERK	RATE CARD TO EMP. DEPT. DATE	PAY ROLL CLERK

AFTER PAYING EMPLOYEE CASHIER SHALL RETURN THIS COUPON TO PAY ROLL DEPARTMENT

FORM H. W. 421[1]

The upper coupon denoted "Ex-Employe's Record" after being filled out completely is detached and sent under sealed cover to the employment department where a notation is made on the cover of the employe's folder, form 412 GN, and the record filed permanently in the folder. The lower coupon, designated as the "Leaving Notice" is filled out to show the employe's name, clock

[1] For reverse side of this notice, see p. 263.

number and latest address, and is used first to clear up all indebtedness of the employe for property which has been loaned to him. The employe is then sent to the pay roll department with this coupon where his account is closed and he is given a pay check for the amount of wages due which, after signing, he presents with the leaving notice to the cashier in exchange for the money due him. After payment has been made the cashier returns this coupon to the pay roll department, on receipt of which the employe's rate card is removed from the pay roll file and forwarded to the employment department where it is filed with the other records in the employe's folder.

In addition to the various forms described above which are filed in the employe's folder, complete detailed reports of all accidents, the papers in connection with all benefit payments under our benefit plan, special investigations, notices of salary garnishment, etc., are all finally sent to the employment department and filed in the employe's folder.

All of the employe's folders are filed alphabetically in locked cabinets and can only be sent out of the department to certain designated officials. When necessary to send these folders out of the department, form H. W. 3172 is inserted in their place.

H. W. 3172 (5-14)

THIS FOLDER IS

OUT

DO NOT REMOVE THIS CARD

NAME	DEP'T	STATE WHY PAPERS WERE REMOVED AND TO WHOM THEY WERE SENT	DATE	REMOVED BY SIGN HERE

THIS CARD MUST BE FILLED OUT AND PUT INTO FILE WHENEVER A FOLDER IS REMOVED FROM THE LIVE OR DEAD FILES

FORM H. W. 3172

REPORTS

Reports are of value in showing general conditions and tendencies. In developing the reports issued by the employment department we have endeavored to have them show the volume of work handled and the turnover and stability of the force. The forms shown below are those of reports issued regularly and in order that the figures may be comparable as between months the data is filled in each month on a tracing containing the figures for the previous months and blueprint copies made and distributed to those interested.

Western Electric Company, Inc.. Standard Report No. MC-428.8
Employment Department.

REPORT OF WORK IN EMPLOYMENT DEPARTMENT.

	January.			Feb. to Dec.	Total for Year.
	Men.	Women.	Total.		
Applicants Interviewed					
Employed					
New					
Reinstatements					
Total					
Did not Report for Duty					
Net Addition to Pay Roll (1)					
Left Employment					
Left Own Accord					
Laid Off Lack of Work					
Suspended					
Dismissed					
Discharged					
Deceased					
Leave of Absence					
Pensioned					
Total (2)					
New Gain on Pay Roll (1-2)					
% Net Gain to Net Addition					
% Reinstatements to Net Addition					
Transfers between Departments					

REPORT M–428.8

Report M-428.8 is of value in showing the net gain on the pay roll in relation to the total number of employes, also the number of reinstatements and the percentage of such reinstatements to the total number employed. These reinstatements cover employes who have previously left the service of the company and have been reëmployed. The report is also of value in showing an analysis of the employes leaving the service of the company by the general classifications which we use. This information is tabulated from the leaving notices, form H. W. 421, previously referred to.

Western Electric Company, Inc.,
Employment Department.

Standard Report No. M-857.2

LENGTH OF SERVICE OF EMPLOYEES LEAVING.

Length of Service		Jan. No.	%	Feb. No.	%	Mar. No.	%	Apr. No.	%	May No.	%	June No.	%	July No.	%	Aug. No.	%	Sept. No.	%	Oct. No.	%	Nov. No.	%	Dec. No.	%	Total For Year No.	%
0-2 weeks	Male																										
	Female																										
2-4 "																											
1-3 months																											
3-6 "																											
6-9 "																											
9-12 "																											
1-2 years																											
2-3 "																											
3-4 "																											
4-5 "																											
5-10 "																											
Over 10"																											
Total Leaving,																											
Total on Roll,																											
% Leaving,																											

REPORT M–857.2

Report M-857.2 is an analysis of the length of service of employes leaving the company. The report as regularly issued is made up to show an analysis covering the works as a whole, and also by the main divisions of the organization. In addition to the regular reports special reports of the same general character are made up from time to time for the purpose of studying conditions in particular departments.

Western Electric Company, Inc.,
Clerical Branch.

Standard Report No.A-857.1
January 1, 1916.

LENGTH OF SERVICE OF EMPLOYEES.
Based on Pay Rolls of January 1st.

Length of Service.	Clerical Branch. Men. No.	%	Clerical Branch. Women. No.	%	Production Branch. Men. No.	%	Production Branch. Women. No.	%	Operating Branch. Men. No.	%	Operating Branch. Women. No.	%	Total. Men. No.	%	Total. Women. No.	%
1 Month																
2 " up to 11 months																
1 year																
2 " up to Maximum																

REPORT A–857.1

Report A-857.1 is issued annually and shows the length of service of all employes on the pay rolls as of January 1. As indicated on the report, it shows the number of employes and the percentages to total number of employes for each of the periods indicated for the main divisions of the organization and the works as a whole.

THE EFFECT OF MOTION STUDY UPON THE WORKERS

By FRANK B. GILBRETH, MEM. A. S. M. E.,
Consulting Management Engineer
and
LILLIAN M. GILBRETH, PH.D.

Motion study makes all activity interesting. While, at first thought, this fact may not seem of great importance, in reality it is the cause of many of the far-reaching results obtained through motion study. Motion study consists of analyzing an activity into its smallest possible elements, and from the results synthesizing a method of performing the activity that shall be more efficient,—the word "efficient" being used in its highest sense.

The process of motion study is such as to interest the worker. While undoubtedly some success could be made of motion study through a trained observer merely watching the worker, we find it of utmost importance and mutually advantageous from every standpoint, to gain the full and hearty coöperation of the worker at once, and to enlist him as a co-worker in the motion study from the moment the first investigation is made. Our methods of making motion study are by the use of the micromotion, simultaneous motion cycle chart, and chronocyclegraph methods. All make it imperative that the worker shall understand what is being done and why, and make it most profitable to every one that the worker shall be able, as well as willing, to help in the work of obtaining methods of least waste by means of motion study. While the porcess of making motion and time studies through the use of the cinematograph, the microchronometer and the cross-sectioned screen have been so reduced in cost as to make them indispensable

even from the cost standpoint, the process is made even more economical when the worker, or the observed man, does his best work, and endeavors to take a part of active initiative in deriving the motion standards. We find in our practice that the worker is only too glad to do this. In fact, it is usually he, oftener than the observer, who cries out, "Wait a moment till this is done in the best way possible," or "Wait a moment, please, I know a way that I believe is easier." Similarly, when using the chronocyclegraph device; the worker is not only interested in the electric lights and their various paths and orbits of dots and dashes, but is most anxious that these paths shall be those of the greatest skill and the fewest number of motions possible.

The various methods used with these various types of apparatus, which are usually new to the worker, present problems in psychology which are interesting to the worker as well as to the observer. The worker is quick to note that, with the new conditions attending the measuring work, his own process varies for a short time at the beginning from his usual habits, because of the entering of the variables of the apparatus and the strange conditions that it involves. He is quick to notice, also, that this effect of strangeness soon disappears, and that he then works exactly in accordance with his normal method. This period of strangeness, far from being a disadvantage, is, on the contrary, often a great advantage. The worker is almost sure to revert to former habit, and an investigator or observer often gains valuable clues not only to excellent standards, but to necessary methods of teaching those standards, particularly with emphasis on eliminating interference of many wrong habits acquired in trade learning prior to conscious effort for motion economy. It is, therefore, clear that during the period of making motion studies the effect of them upon the worker is educative to the highest degree, for not only does he become interested in what he does, but he learns to think of all activity in terms of motions and elements of motions. The by-products of this are also important, as he is always able afterwards to learn new work much faster and with comparatively little coaching, and as he has that success that usually attends the work of one who knows he knows the least wasteful method of attack of learning the new problems or solving the new task.

The effects of motion study are particularly striking upon the

observer or the man actually making the studies. This is true not only during the time of making the observation, but also during the time spent in embodying the data derived in simultaneous cycle motion charts and in motion models. These motion models, which are wire representations of the paths of the motion, made from the stereoscopic records derived from the chronocyclegraph process have a peculiar educative value that is well embodied in the following statement of a young engineer who spent some time making motion models as a part of that thorough training for motion and time study man which we believe so necessary:

> After making a number of models of motions I have changed from a scoffer to a firm believer. I believe not only in their value as an aid to the study of the psychology of motions, but also as to their educational value in the teaching of the motion study man.
>
> I consider them of the same value to the motion study man as is the model of an engine or a mechanical device to an engineer. If the engineer was to study, for instance, a railroad engine, and the only chance he had to study was to watch an engine going by him at express train speed, his impression as to the mechanical working of the engine would be, to say the least, vague.
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> A motion, in itself, is intangible, but a model of a motion gives one an altogether different viewpoint, as it seems to make one see more clearly that each motion leaves a definite path, which path may be subjected to analysis.
>
> I have made motion studies since making models, and what I learned from making the models has convinced me of their value. In former motion studies which I have made, my attention was always divided, more or less equally, between the direct distance between the starting and finishing points of the motion, the equipment, and the surroundings. I have found that, since seeing a motion, as represented by a model, I am better able to concentrate first on the motion itself, and then upon the variables which affect the motion. This seems to me a more logical method, and I know that I have had better results.
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> I believe a good method of illustrating how a motion model helps one to visualize is to compare it with the wake left by an ocean liner. When one stands at the stern of a liner, which changes its course often, and watches the wake he can visualize the changes more readily than when unable to see the wake.

It is interesting to note here not only the interest aroused intensively in the subject of motion study itself, but also extensively in the correlation of processes in the industries with general processes outside. The motion study man is a specialist who, because of his work, spends a large amount of time in the close study of motions, but to some extent this intensive and extensive interest is aroused in all those engaged in motion study, whether as observers or observed.

After the results of motion study are actually installed the effects are as great or greater upon those who work under the derived standards. It must be understood that *motion study* always implies *fatigue study*,[1] for the best and least wasteful results cannot be obtained otherwise, and that the worker who operates under these standards, therefore, not only has time to do the work in the best way, but ample time for adequate recovery from the fatigue of his work. This procedure provides directly for his physical and mental well-being. Motion study lays particular emphasis upon this. The great bogey of all who argue against standardization is "the awful resulting monotony." Now psychology,[2] as well as the results in actual practice, proves that monotony comes not from performing the activity the same way every time, but from a *lack of interest involved in, or associated with, the activity.* This interest is supplied not only directly by motion study, but indirectly by the other parts of measured functional management, such as devices for eliminating unnecessary fatigue and for overcoming necessary fatigue.

Besides all this there is the interest aroused and the education resulting from the graphic representation of the results of motion study data to the worker as well as the observer. The pictures of the micromotion films are projected at the normal speed of the moving picture. They are also examined one at a time. The chronocyclegraphs in three dimensions are shown through the stereoscope, on the screen, by means of the wire motion models[3] to the workers at the foremen's and workers' meetings and are there discussed. All the traditional knowledge is literally collected, measured, sorted, tagged and labelled. This data, together with indisputable measuring methods is presented before those possessing the greatest craft skill of the old methods, and who can quickest actually learn the new knowledge and put it to use. The new knowledge is of no use to the employer without the coöperation of the worker. This fact puts the relations between the worker and his employer on a new basis. They *must* coöperate, or both pay an awful price. These new methods have demonstrated that

[1] See *Fatigue Study*, Sturgis and Walton, New York City.

[2] See *The Psychology of Management*, Sturgis and Walton, New York City.

[3] See "Motion Models: Their Use in the Transference of Experience and the Presentation of Comparative Results in Educational Methods,"—a paper presented at the American Association for the Advancement of Science.

there is so much to learn that the employer cannot afford to put on and lay off his employees in proportion to the receipt of orders. He must solve the problem of steady employment. He cannot afford to let his specially trained men "get away." This is of vital importance in its effect upon the mental condition and activity of the worker.

By these means the workers, who are the actual producers of the nation, become familiar in every day experience with motion study and time study instruments of precision and with the results of their use.[4] Such knowledge in the hands of our workers is the means of their being able to take the initiative in acquiring greater skill in all trades and in all life works. This is one of the best forms of industrial preparedness. It must be emphasized that the facts concerning motion study here stated embody not only a program but a record. The actual every day practice of motion study shows these effects upon the worker not only in the intangible results of added interest and a different attitude towards the work, but also in such tangible results as a larger number and a more profitable set of suggestions in the suggestion boxes, better attended and more profitable foremen's and workers' meetings, a greater number of promotions, more coöperation, more reading and study of the science of management, and higher wages earned with greater ease.

Motion study has no right to claim all the benefits that accrue from measured functional management, but, as a part of this management, it shares in these benefits, and thus those who work under it are assured of unusually high pay, during and after the motion study, a chance for promotion, physical and mental well-being, and a coöperative atmosphere in which to work. Motion study has the right to claim as its own benefits an added interest not only in the activity involved in the particular work done in the office or plant or wherever the work place may be, but in all activity away from as well as at work. It, therefore, benefits employee, as it does employer, as it does all those actively engaged in working under, or interested in it, in that *it makes "to do," mean "to be interested," and to be interested means to be more efficient, more prosperous, and more happy.*

[4] See "Motion Study and Time Study Instruments of Precision," *Transactions International Engineering Congress*, 1915.

THE RELATION OF HOME CONDITIONS TO INDUSTRIAL EFFICIENCY

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For some time various agencies which aim toward the betterment of society have realized that no lasting results can be secured without the coöperation of the home. The school, the church, the hospital, organized charity, and in fact all organizations which assume it is their responsibility to help those with whom they come in contact are faced by many problems which cannot be solved without a knowledge of home conditions. Of late years industry, too, in looking more deeply into the causes of ill health and dissatisfaction among workers has discovered that the removal of these causes cannot take place within the four walls of the factory alone. Many firms today avowedly profess to do all in their power to maintain the health of their employes and to further their training and education. The greater advance an organization makes in this direction, the more intelligently it solves its problems connected with the human element, by so much does it recognize the close relationship of the home to the job.

The fact that there are armies of young workers entering the industrial field complicates the question. To say that young men and women do not need friendly aid and advice as to their personal problems is to confess ignorance. And it is obvious that many of these personal problems are vitally connected with home conditions. When the home and the school turn out young people trained in responsibility and with character and habits which fortify them for life and its difficulties and when the state does more than it now does toward training in citizenship and toward offering healthy recreation to its family, perhaps this burden will not fall so heavily upon industry. But at the present stage of sociological development industry must coöperate with all other agencies and, most of all, with the home, in training and educating and developing its young workers if it wishes to maintain health and prosperity among them.

The physical conditions of a factory may be up to the highest standard of the times; sanitation and ventilation may be as nearly perfect as possible; rest rooms, lunch rooms, recreational facilities, shower baths and other comforts and luxuries may be provided by an employer whose aim is to make the working conditions of his people as pleasant as possible. Hours may be reasonably short, wages may be high, a system removing friction and worry in connection with the work itself may have been installed. And yet, the employer who is intelligently attempting to reduce his labor turnover and to improve the personnel of his organization knows that these things alone, while essential, will not suffice. He recognizes that the health and well-being of his people are fully as dependent upon the conditions which confront them outside of the factory as upon those existing within. He recognizes, too, that these conditions outside of their work constitute fully as important factors in their steadiness and efficiency as any working conditions he may provide.

As for the "right" of the factory management to interest itself in the lives of workers outside of the factory, it is not only a "right" when it affects the worker in his work, but it is a duty which is a natural outgrowth of executive responsibility. The progressive manager knows full well the value of hygienic factory conditions for his workers but of what avail is it to provide healthful working conditions from seven in the morning until five in the evening if these same workers are to live in unhealthful surroundings and under improper influences from five at night until seven in the morning? Interest in the hygiene of the worker cannot be truly effective, therefore, unless it attaches itself to the worker at all times. It is all very well to use such trite expressions as "paternalism" and "benevolent despotism" and other hackneyed phrases in connection with this subject, but actual experience confirms us in our belief that people are not "grown-ups" merely because they are termed so. Unfortunately most people are as ignorant of the laws of health as babes in arms. It is all very ideal to say that we should manage our own lives. No one denies that this is an ultimate goal toward which every intelligent agency for the betterment of mankind should be constantly aiming, but in the meantime it is hardly practical to expect a perfect democracy to spring into being full fledged. In other words, before we can manage our own affairs

we must be taught how. For example, when we consider the numbers of foreign people who are working in our American industrial establishments it is absurd to talk about thrusting them into wholly new surroundings and difficulties without any friendly advice and instruction from those who have a thorough acquaintanceship with these surroundings. The modern tendency is to try to avoid the mistakes of others. It is unscientific to proceed by "the rule of thumb"; in other words, science and knowledge are to proceed from where the other fellow left off in order to eliminate the constant waste and duplication of past achievement. Now, cannot this be carried into the field of modern hygiene? Would it not be inexcusable to "let people work out their own salvation" if by so doing their health and the health of the race is affected? Moreover, if an employer wishes to know why a worker has constant headaches and is therefore unfitted for his work and if he has done everything that can be done inside the the factory to discover the cause, who can question his right to go into the home of the worker in the effort to learn facts which will make it possible for him to eradicate the headaches and to retain the worker? People who shrug their shoulders and say this is "impertinent interference" would prefer, possibly, to let the headaches go on until the worker became so inefficient that discharge would inevitably follow. The intelligent employer, however, does not follow this *laissez faire* policy. He knows that by reducing the causes of inefficiency he is helping to make better workers and better citizens and a more stable and steadily prosperous body of employes and he considers it his duty to use every honest means to attain such a desirable end.

We hear a great deal today about "occupational diseases," about employers being responsible for the lack of security and continuity of employment, about the unfitting of women for motherhood because of industry's demands and about the lack of opportunity to rise in the industrial world. These charges, however, cannot be laid at the door of industry itself but of industrial administration. Industry, badly regulated, gives justification to such charges, but industry properly regulated will produce quite opposite results. In any case, intelligent employers welcome the opportunity to join with statisticians and investigators in an effort to seek

the truth and if the truth cannot be found within the factory walls it is their duty to get it outside.

Society justly holds industry responsible for certain results; employers, therefore, must not only be permitted but must be encouraged to use their fullest intelligence in attaining these results. Furthermore, it is society's duty to support them in their efforts instead of indulging in the ill-founded, destructive criticism which has become the fashion, especially among inexperienced theorists and academicians.

The fundamental factors of home influence are physical, mental and moral. It is obvious that as far as the physical conditions of the home are concerned they have a vital connection with the health of the worker. A man who sleeps with his windows closed, and who lives in unsanitary surroundings will naturally suffer in due course of time. We have found, when making home visits, people sleeping in small bedrooms with the windows tightly closed and gas stoves burning. Sometimes bedrooms are badly overcrowded in order to keep intact the "parlor" and dining room. The case of two girls who were suffering from constant headaches may be instanced, who when visited at home were found to be living in the attic of a new frame house. Their father, mother, three boys and two girls were crowded in this small attic with no privacy whatever, and with the windows tightly corked and a large gas stove without a flue. The father had recently bought the house and was renting to some families the first and second floors as well as a small house in the rear where he had formerly lived. He had stopped working and was having a beautiful time on his rent money and the pay envelopes of his two daughters. He was finally persuaded to move his family downstairs and the effect on their health and attitude of mind was almost immediate. Numerous cases could be cited of people who are anemic and pale during the winter months and who immediately begin to take on color and show more vigor when summer comes. It is hard to convince such people that winter air in their bedrooms is not deadly. Many foreigners do not realize that what kept them alive in the old country was probably the fact that they were engaged in field work through the day and that a close bedroom did not therefore work havoc as it does to indoor workers. In cases where employes complain that they are not feeling well and the work does not agree with them, it is generally

found that living conditions are in reality responsible. When these have been remedied their attitude toward their work invariably changes.

In Cleveland most of the modern houses for working people are single or two-family houses with a fair amount of ground. The majority of the newer houses have bath rooms, the acquiring of which is as yet a matter of conscious pride. Bath rooms, in other words, are a matter of style and distinction in the neighborhood. You belong to a little higher stratum of society if you have such a luxury. What's the difference? We all know necessities grow out of luxuries and that "style" has played an important part in raising the standard of living. There is an encouraging tendency on the part of our workers to build their own homes, to have modern plumbing and to have enough ground for a vegetable garden and flowers. There is probably no large city in the country whose workers' homes show more pride in flowers and lawns than do those of Cleveland. The progressive employer realizes that the more comfortable the homes of his employes are the better and more desirable workers they make. It is only the most benighted and ignorant man who does not think it is "good business" to hire people who are aiming to provide themselves and their families with pleasant homes. Every encouragement should be offered to the worker who is living in unhealthy, disagreeable surroundings to get into a better environment as soon as possible. People who take pride in their homes are invariably more thrifty, ambitious and reliable and it has been our experience that wherever we have been able to induce a man to improve his housing conditions it has resulted in making him not only a steadier and more efficient worker, but also a more self-respecting member of the community.

But responsibility cannot end with an attempt to better the physical condition of the home. The moral and mental atmosphere have, also, an untold influence on the efficiency of the worker. Centuries of tradition, superstition and wrong thinking have left their imprint on all of us and in some homes science and reason and logic are eyed with suspicion and only reluctantly granted a lodging. It is difficult to persuade a woman to have her eyes examined by a competent oculist when her mother and grandmother have convinced her that ear rings will cure sore eyes. It is hard to root out of some foreign-born men the deeply imbedded idea that their

wives are beasts of burden. So many points of view come to light, so many warped ideas which have been passed on from generation to generation, and the need for tact and wise dealing and patience is infinite.

Through close contact with the homes of working people one is more and more awakened to the problems which confront women in industry. Constantly we must keep in mind that the girl workers of today are the wives and mothers of tomorrow. In an industrial establishment where the health of the people is of first importance a girl stands a far greater chance of proper physical development than she does in the average home where, as anyone acquainted with this problem well knows, the standards and ideas of health are almost mediaeval. As for the much debated question concerning the influence of industry on motherhood, we must keep in mind that motherhood means not only the physical function of producing offspring but it means as well the bringing up and training of children. A rightly conducted business, requiring high personal standards and affording training such as is not obtainable elsewhere, not only develops healthier and more competent people but also develops their character. And surely character is the *sine qua non* of such an exacting profession as that of motherhood. Let us not be sentimental in the consideration of "women in industry." I know many a girl today who will be far more careful in the choice of a husband because she has a good job and because she is facing actual conditions of life than if she did not have the opportunities which modern industry furnishes to women.

But, whether or not we welcome these broadening opportunities, we must not blind ourselves to the accompanying problems which present themselves. Beginning with the young girl, there is the growing independence, the impatience with parental restraint, the cheap amusements which are slowly but surely vitiating her taste and lowering her standards. The question of recreation alone is a far-reaching one, indeed. How can a girl develop into a good worker when her parents permit her to frequent cheap dance halls and movies any and every night of the week? Or, going to the other extreme, how can she work with any spirit and interest if her parents obdurately refuse to permit her to go any place and, though she may be brimming over with life and youth, she is practically a prisoner in her own house? We have had girls who have grown pale

and listless and have lost all interest in their work because their parents would not permit them to invite any of their friends to their homes nor would they let them out of their sight in the evenings. The intelligent manager realizes keenly the wisdom of interesting the families of his workers in this problem of sane and natural recreation. He knows that the dissipated person is not a good earner nor a satisfied, happy worker and that men and women who are interested in good books and good music and healthy, wholesome forms of amusement, are those who qualify for advancement and therefore belong in the ranks of the "desirable." And he also knows that preaching to people to be good will not keep them from spending their idle time unprofitably. There is probably nothing the state could do which would accrue more to the benefit of working people than to furnish profitable recreational facilities to them. It is insufficient to pass laws which shorten working hours without proper provision for safeguarding the additional hours of recreation which result. Enlightened management recognizes that these additional hours may be devoted to uses which destroy instead of build up. For this reason it realizes its responsibility not only to furnish wholesome recreation which develops both body and mind but sees here another reason for the coöperation of the home.

In connection with the question of women in industry, we must consider the woman with "two jobs." Women are generally called on to stay at home when there is any sickness in the family. The idea of paying a competent neighbor or calling on the Visiting Nurses' Association instead of staying away from work to take care of a sick relative is of slow growth. There is need of much education in the home on this very subject of irregularity of attendance. It is not enough to have a worker impressed with a sense of responsibility. The worker's family also must have the right attitude toward this question. Home visits frequently disclose the fact that women who work all day in the factory also cook and scrub and wash at home in the evenings. A case of this sort was revealed a couple of years ago when we were canvassing the shop to see who needed to join the classes in English for foreigners. Peter R., a Hungarian who had come to America ten years ago and had become fairly proficient in English, demurred when he was told that we wished his wife, who had come over years later, to go to school and learn English from 4:30 to 5:30 twice a week. Said Peter, "But

who'll get my supper on Tuesdays and Thursdays if she stays at the factory to learn English?" When we told him Barbara worked all day long in the factory and worked just as hard as he did and that it would not hurt him in the least to cook the supper two days in the week, his dignity was obviously injured. It was only after much argument that we convinced him cooking was not Barbara's sacred and divine duty since he had permitted her to take upon herself the responsibility of a factory job. He finally agreed to cook his own supper Tuesdays and Thursdays and today Barbara speaks English and Peter knows what it means to have two jobs. Whenever circumstances warrant, we refuse to keep in our employ married women. They are as a rule irregular in attendance and burdened with household duties and we often find their husbands are depending on them for support. This unwritten law, we have found, has materially lessened the early, precipitate marriages in our factory. Girls of eighteen used to say, "I want off next Friday to get married. I'll be back Monday," but now we often hear, "Well, I'm not going to marry him until I know him better," or "You bet I won't work after I'm married. A girl has enough to do to keep house."

The idea that it is wiser for a girl to have a bank account than to marry without a penny and buy everything on the installment plan is also gaining headway. This matter of the bank account is one of the most vital occasions for home visits. It is often found that a girl's earnings are low because she has no incentive to make money. In an astonishing number of cases a worker passes over an unopened pay envelope to her mother even when no financial necessity for this exists. When a mother is visited and urged to allow her daughter to deposit in our penny bank all over a given sum, or a certain percentage of her earnings each pay day, it is surprising how quickly the girl's earning power increases. Many parents consider a child merely a financial asset and it is hard to convince them that they are removing all incentive from him by requiring him to turn over his unopened pay envelope. In some cases parents say, "No, my son shall never pay board. That would make him too independent. He must give me his pay." Besides removing the incentive to earn, this attitude on the part of the parents encourages early and ill-considered marriage as the only means of securing financial independence.

But if home visiting discloses the necessity of urging parents to permit their children to save it also reveals the value of training in spending. Unfortunately, the question of foreign parentage brings its difficulties in this matter. A girl coaxes and whines and makes life miserable for her mother until she is permitted to buy a white willow plume. If the mother protests, she is told that she does not know how girls in America dress and she reluctantly yields to this argument. A mother complained to us recently that her daughter was so addicted to the fancy shoe craze that she had thirteen pairs of shoes in her wardrobe and wanted money out of her last pay to buy another pair. This mother had never allowed her daughter to have a stipulated sum of money for clothes and some time after we persuaded her to do this in order that the girl might have some experience in proportionate expenditure. She told us that "Jennie soon found she had to spend her money for some other things besides shoes." When it is possible to convince parents of the wisdom of letting their girls and boys learn how to spend the results speak for themselves.

Sometimes home visits are necessary for the sake of securing coöperation on the subject of simplicity of dress. It is no longer a debatable question that elaborate clothes and jewelry and powder and paint have a demoralizing effect on the character and ability of a working girl. One mother said, "My other daughter works down at K's and she says the girls look something swell when they go to work, velvet skirts, pearl earrings, just as dolled up as if they was going to a party. I think that's nice for them girls." Some parents, on the other hand, are very responsible and coöperative in encouraging neatness and cleanliness and simplicity of dress. Sometimes radical measures have to be taken to bring about higher standards of cleanliness. Occasionally a very clean girl will come from a very dirty home but generally when a girl is careless about her appearance the cause of the trouble can be located at home. In connection with this it may be mentioned that the influence of a sanitary, well kept, orderly factory on the home is immeasurable.

It is self-evident that the problems which come up in connection with home visits are of infinite variety. The influence of quack doctors, of the idea that patent medicines are panaceas, the ignorance of food and diet (about which a separate chapter could be written) and of the simple rules of hygiene, the curse of modern

funerals and their attendant expense, all these and more confront the home visitor. Sometimes old wives' remedies present ludicrous situations. A good example of this is illustrated by the following: the factory nurse visited a girl who had sore throat and found she had wrapped a red herring around it and had drunk some kerosene. A mother was informed that her daughter was in danger of injuring her eyes by doing fine embroidery for her trousseau until late every night. During the conversation the nurse said, "You know her eyes are not very strong. She wears glasses." "Oh," replied the mother, "She don't wear glasses for her eyes. She wears 'em for her stummick." If any service worker in a factory expects to find an intelligent conception of the human body and its needs in the average home and if she thinks she can bring about a revolutionary change in ideas by home visiting she will be disappointed. But the evolutionary change is evident to the close observer and the growing confidence and coöperation and willingness to listen to another viewpoint become more and more noticeable as time passes.

Sometimes very intimate problems present themselves for solution. A girl whose environment is hopelessly bad may have to be advised to leave home and live with decent people. Sometimes a father has to be summoned before a municipal court and warned or sentenced. Frequently men must be forced to go to work when they are lazily falling back on the women of the family. A drunken father occasionally must be taken in hand and a timid girl instructed in detail how to assume a healthy degree of self-assertion. A case in point is that of Rosie T. whose father celebrated the receipt of his pay envelope every Saturday evening by beating her mother. Rosie was naturally much worried over this and once in the intimacy of a chat in her home she said she was at a loss to know what to do. The idea of filing an objection with her father personally seemed to require too much courage. "Talk to him!" she said scornfully "You can't talk to *him*. He's too bull-headed." Her mother was advised to get the father's pay herself and Rosie was told to tell her father when he objected to interference with his customary amusement that "American men do not beat their wives" and, in short, boldly to face him and "stand up" to him. The following Monday morning Rosie came in to the service department with beaming face. "Oh!" she exclaimed,

It worked fine. My pap came home awful mad and sez "Who's got my pay envelope?" An' I sez, "We have"; an' he started to hit my mother and I sez, "Here's where you get off! No woman in America has to take a lickin' off no man." An' you ought to seen him how supprised he was to see us standin' up for ourselves.

After that Rosie said, "Somehow I don't know what it is to feel afraid any more. I can talk up for myself now and he knows if he don't behave we won't stand for it. I feel bold now!"

It is no less necessary to get the "home folks" to understand the shop methods and system of work than it is to attempt to bring about an intelligent viewpoint in relation to health and a higher standard of living. Slipshod methods in many establishments account for much of the lack of responsibility of workers toward their jobs. Men who have worked in places where frequent absences were taken for granted occasionally resent any strictness on the part of the organization which demands regular attendance, but a visit to the home and a frank discussion with the wife or mother of the necessity of "being steady on the job" will generally bring about an honest attempt to help Jack or Jim to be more prompt and regular. Moreover, patience and tact must be exercised in educating the home people to an understanding of modern progressive business methods and the reasons for them. A woman who is acquainted with the fact that an organization has just enough workers to turn out its work and that every division is responsible for feeding another division will be much more likely to pay a neighbor or relative to take care of her when she is sick than to ask her husband or daughter to stay at home. The following letter from a mother of one of our girls shows an understanding of "standards" and "averages" which could not have been obtained except through an intelligent interest of the home in the shop:

DEAR MADAM—

I thought I would drop you a few lines letting you know my girl comes home from work all disgusted she worries because she dont turn out her standard she allways says Ma it dont agree for two chums to work side by side and thats Anna and me I always tell her that she dont make as much as she used to and she sayes she could make more if she would try but that Anna and her talk too much She says lot of times she dont feel like talking but An asks her one question and then they keep it up When Anna is on the other machine for a half day Susie makes good when she comes back again they talk and then that brings down Susie's average. Susie didn't want to tell you about this but she always complains at home that she dont like to work aside of her chum they have to much

to talk about. I like Anna very well but she believes in talking to much Miss G dont you think I was right of letting you know of this.

Yours respectfully

MRS. R.

It is this kind of understanding and coöperation which home visiting aims among other things to secure and the degree to which they exist often determines the steadiness and reliability of the worker. Moreover, every intelligent manager knows how much attitude of mind has to do with an employe's success. A person who hears constant criticism of his place of work and meets with scornful disapprobation of shop discipline and system at home is not likely to be in a frame of mind which induces honest effort. The subtle influence of the home atmosphere cannot indeed be measured, but it may safely be argued that no other factor except, possibly, the work itself so deeply affects the efficiency of the worker.

The occasions for home visits are many and may be made innumerable. The families of new workers should be visited as soon as possible, primarily for the sake of friendly contact. Cases of sickness and discipline obviously need to be followed into the home. An investigator recently seemed surprised at the lack of resentment toward our "intrusion" into the homes of our people. She was invited to accompany a member of the service department one morning when fifteen visits were made (an automobile expedites home visiting for the department) and she was frankly astonished at the welcome which was given the visitor in every instance. Home visiting has become such a matter of fact among our employes that no one questions the honesty of motives prompting it. A number of years of experience have proved not only that the Clothcraft Shop employes do not consider it "impertinent" but that they welcome the interest which home visiting signifies. In fact, parents frequently come to us to ask our help in solving problems at home. There must be absolute frankness of approach and treatment, however, in every case, as nothing could more injure the work of a service department than insincerity.

The "handling of labor" which means reducing people to automatons is one thing and that which means a deep understanding of the psychology of human nature and of the intricate and devious methods by which people are inspired to become better workers and better citizens is a vastly different thing. And anyone who

approaches the subject of this newer and more intelligent kind of handling or rather guiding of human beings will confess himself baffled without both a thorough understanding of home conditions and the coöperation of the home. Finally, in this as well as in all other phases of factory service work, the underlying purpose must be a genuine desire to further the advancement of workers by education and coöperative training and the service worker must ever have vision born of the words of Marcus Aurelius, "Men exist for the sake of one another; teach them, then, or bear with them."

THE THREE POSITION PLAN OF PROMOTION

By Frank B. Gilbreth, Mem. A. S. M. E.,
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An adequate system of promotion is the solution not only of holding employees in an organization, but also of the employment problem.

There is much emphasis today upon the proper *selection* of employees, and many and elaborate systems have been undertaken for a scientific, or near-scientific, *placement.* These are not in any wise to be criticized, for the selection of the individuals comprising any organization is important, and any plan that will cause the employment manager to plan his duties carefully and to give each decision on the fortunes of others careful consideration is to be commended. It must be realized, however, that even more important is holding and helping these employees after they have been selected, and providing an adequate systematized plan of advancement for them. In the Three Position Plan of Promotion we have not only the true and proved answer to the problem of promotion, but also the means by which efficient placement becomes almost automatic, and a supply of desirable applicants for any vacant position is constantly available. No system of placement can hope to succeed unless such a supply of applicants is available.

We wish to emphasize then three points:

1. The necessity of attracting desirable applicants.
2. The necessity of holding, fitting, and promoting those already employed.
3. The interdependence of these two.

We have never known a better friend of the worker than Mr. James Mapes Dodge, and he was wont to emphasize and demonstrate the benefit not only to the employee, but also to the organization of holding the coöperating employee, and the great and needless loss to the organization, to the worker, and to society in a constant change of the personnel of the organization. Now, no organization can hope to hold its members that does not consider not only the welfare of the organization as a whole, but also the welfare of the individuals composing that organization.

The Three Position Plan of Promotion considers each man as occupying three positions in the organization, and considers these three positions as constantly changing in an upward spiral, as the man is promoted from the lowest position that he occupies and into the position next higher than the highest position that he occupies. The three positions are as follows: first, and lowest, the position that the man has last occupied in the organization; second, the position that the man is occupying at present in the organization; third, and highest, the position that the man will next occupy. In the first position the worker occupies the place of the teacher, this position being at the same time occupied by two other men, that is, by the worker doing the work, who receives little or no instruction in the duties of that position except in an emergency, and by the worker below who is learning the work. In the second position the worker is actually in charge of the work, and is constantly also the teacher of the man next below him, who will next occupy the position. He is also, in emergencies, a learner of the duties of his present position from the man above him. In the third position the worker occupies the place of learner, and is being constantly instructed by the man in the duties of the position immediately above.

Naturally a plan like this demands a close coördination of all positions. This is provided for through the master promotion chart. This chart is in the hands of the man in charge of promotion. It is slightly different for each organization. It consists of a

schematic arrangement of all positions in the organization, so arranged as to provide for lines of most rapid advancement, along the various functions and subfunctions, under which the measured functional management by which we operate, works. The great advantage of such a chart is that it makes possible visualizing the complete problem of the organization's needs in teaching and preparing its members. The direct product of this is that the man in charge of promotion sees clearly the needs and the means of filling them, the demand and the supply. The important by-product is the gradual evolution of permanent, rapid, direct paths of promotion. This means the abolishment of the "blind alley" job, that is, a position into which some member of the organization drifts with no chance for advancement. Another by-product of this chart is the fact that the promotion head, the promotion manager, or chief of promotion, as he has been variously called, can arrange for shifting or transferring the worker easily, if he sees that he has been improperly placed, or, if he develops abilities along some unexpected line. This is often the case under this type of management where there is great opportunity for the development of latent, as well as apparent, abilities. This master promotion chart is the great educative force to the management as to the importance of proper promotion.

The interests of the individual worker and his education as to the importance of promotion are carried on through the individual promotion charts. Upon these the records of each and every member of the organization are separately kept. These sheets are often called "fortune sheets," and it is this aspect of them that is of peculiar interest to the psychologist. When a worker becomes a member of the organization he is called into the department in charge of advancement or promotion, and given one of these fortune sheets. Upon it is shown his present position, and he and the man in charge outline together his possible and probable line of advancement. The sheet then becomes his fortune map, or fortune schedule. The projected line of promotion is outlined in green, and upon it are placed the dates at which it is hoped he may reach the various stages of advancement. At set times the worker and the promotion chief, or one of his helpers, meet, and the line of actual progress of advancement of the worker is traced upon the map in red, with the dates of achieving the various

positions. The two then consult as to existing conditions, the special reading and studying necessary for fitting for the new positions, possible changes, or betterments. The direct product of this is that the worker understands what he is doing, gets expert advice for greater progress, and realizes that there is, and must be, coöperation between him and the promotion department for the good of all concerned. The by-products are equally, or more, important. One is that the worker is glad to impart all information that would be of help to the organization as to his history and antecedents, his home and other social conditions outside the plant, that help or hinder his plans of preparing, ambitions, etc. It is common practice in these days to present the applicant with blanks to be filled in with all this information. We have such blanks, and use them in selecting applicants, always with the proviso that, if the applicant shows any disinclination to fill out such parts of the blank as tell of his ambitions or other details, which he may consider confidential, he be not required to do so. This information has been invariably volunteered, when the fortune map, or schedule, is understood. Naturally the applicant must furnish such information as will show his ability and reliability; but, as we will see later, these are so supplemented by data obtained through other sources that it is not necessary to ask for information usually considered confidential before it is volunteered. The second by-product of these fortune sheets is directly connected with the solution of the problem of getting constantly a group of desirable applicants from which to select more wisely. Thus, when the worker looks at his fortune sheet, and understands the three position plan of employment, he recognizes that he must train some one to take his position before he can hope to be most rapidly advanced. Naturally he first looks around in the organization to see who is available, for it is always desired that those within the organization be advanced first. However, if no such person is available, he reviews his entire acquaintance, and all possible sources for new workers, in order that he may obtain the most desirable person easy to train into that position. It is not necessary to dwell long upon the advantages of this system for holding members already in the organization. No worker who is constitutionally able to become a permanent member of an organization will wish to change, if he is receiving adequate pay

and has ample opportunity for advancement, especially, if, as here, he is a member of a group where it is to the advantage—more than that—actually to the selfish interest, of every member to push all higher members up, and to teach and fit others to advance from below. Inseparably associated with this is the fact that any worker will be ready and glad to enter an organization where such conditions exist, and a desirable applicant will automatically present himself, when needed, at the direct request of some one who knows his particular fitness for the job, and desires him to have it. This selecting of the worker by the worker is real democracy. An organization built thus has proved to be the most satisfying to both management and workers.

Now there are various questions that may arise concerning this subject, that it is well to answer here.

1. *What becomes of the workers who find exactly the positions that suit them, and have no desire to advance?*

The answer to this is that, if a worker finds such a position, he is retained in it, and that others who go beyond it are trained by him in the work of that position until they know enough about it to advance to the next higher grade. This often happens, especially in the case of the workers who prefer positions entailing comparatively little responsibility, and who, arriving at some work that satisfies them, and that involves but slight responsibility, choose to make that particular work a life vocation. If, as is seldom the case, a second worker is found who desires to remain in the same position, it is sometimes advisable to place such a contented specialist in another organization, as trained and satisfied expert workers and teachers are all too rare.

2. *If promotion is constant, are not men constantly promoted or graduated out of the organization?*

The answer to this is "Yes, and always to waiting and far better positions."

3. *What becomes of such well known "blind alley" jobs as that of elevator or errand boy?*

These positions are transformed into training stations or schools. Through them the young worker is put in touch with various lines

of activity in the organization and his possibilities, capabilities and tastes are noted. Tending jobs under this type of management are also so used as training stations. The new work for crippled soldiers, which is now occupying so much of our attention, is also furnishing a means of filling such "blind alley" jobs. A position that might be deadening for a young, ambitious boy, or for a progressive worker, might prove the salvation of a maimed, or crippled, worker who might otherwise become an idle, unproductive, and worst of all, a discouraged and unhappy member of the community.

4. *How can the close "human touch" that is essential to this system of promotion be maintained in a large organization?*

We maintain this spirit through what we call the "Godfather Movement." This is especially successful where there are many young workers. Some older man in the organization, preferably in the same department, or interested in the same line of work, is made the godfather of several young, or inexperienced, workers, and keeps in touch constantly with their progress. We call this man "the Godfather" in all foreign countries, where the relation between godparent and godchild is an unusually close one, and is very similar to the sort of relation supposed to exist here between members of the same family. It resembles, perhaps, in this country more the "Big Brother" or "Big Sister" Movement now so popular.

5. *What are the actual results of the workers already employed using this system of promotion.*

They are most satisfactory in every case. In organizations where we have installed this system as a part of our plan of management we have seen

a. Office and messenger boys pass through five positions in one year.
b. A messenger boy become head storekeeper in three years.
c. A mechanic become night superintendent in four years.
d. A foreman become superintendent in two years.
e. A receiving clerk become head production clerk in three years.
f. A stenographer pass through five positions to motion study assistant in one year.
g. A stenographer pass through five positions to assistant chief of the three position plan in one and one half years.
h. An office boy become assistant purchasing agent in three years.

i. A half time apprentice become foreman in three and one half years.
j. A stenographer become head of the department of graphical presentation of statistics.
k. A laborer become superintendent in nine years.

and other cases too numerous to mention, many advancing in spite of predicted dire failure of the plan of selection, placement and promotion. The greatest good is, perhaps, not the individual advancement, but the increased interest and zeal of all the workers under this plan.

6. *What are the practical results on supply of applicants and on better placement?*

In our experience we have never failed when using this plan of promotion to supply all needs of the organization almost immediately with most desirable and efficient workers. Every member of the organization working under this plan has become an active and successful "employment bureau man."

7. *What are the advantages of this whole plan to the man in charge of the function of employment?*

He benefits by this plan, perhaps, more than any one else. He comes in close touch with every member of the organization. It is to the advantage of every member to tell him exactly which individuals he thinks had better follow him, whether these are inside or outside the organization. Imagine for a moment that you are such a chief. *A* comes in and says, "Mr. Blank, I should like *O* to follow me in my position." *B* comes in and says, "I should like *O* to follow me in my position." *C* comes in and says, "Mr. Blank, I should like *O* to follow me in my position." Naturally you would recognize the wisdom of getting better acquainted with *O*. Or, perhaps, you suggest to *A*, "I think that *M* would be a good man to follow you," and *A* says, "No, I think I had better have some one else." You suggest *M* also to *B* and *C*, who reply somewhat along similar lines. There may be nothing fundamentally wrong with *M*, but the line you have planned will probably not receive as much coöperation as it should, and, in any case, there is something there worth investigating. Again, a worker comes to you and says, "Mr. Blank, I know a man who is not in this organization who would be just the person to follow me. You

know there is no one available just now, as the man below me is satisfied with his job." Here follow particulars as to the desired man's education, training, etc., which act as the supplementary data before mentioned. The recommender is given a blank form of "recommendation" to fill out for filing, whether or not the proposed man is hired. This naturally leads to the question

8. *Can any part of this plan of promotion be used without the other parts?*

The answer is "Yes" and "No." "No," if the desired results are to be obtained in full, since the entire system is interrelated and correlated with the complete plan of Measured Functional Management. "Yes," in that the fundamental ideas underlying this plan can undoubtedly be worked out in many ways. The immediate success of this plan is fostered by a carefully devised set of forms and charts and other devices for visualizing the possibilities of individual success that have stood the test of time and use. The ultimate success of this plan depends upon the principles[1] that underly it, giving every man a square deal, a maximum chance for coöperation, advancement and prosperity, in other words, the opportunity for simultaneous individual and social development.

[1] See *The Psychology of Management*, Sturgis and Walton, New York City.

THE SO-CALLED PROFIT SHARING SYSTEM IN THE FORD PLANT

By John R. Lee,
Detroit, Mich.

It is quite probable that most of you have a pretty full and complete conception of what the Ford Motor Company has been trying to accomplish in a coöperative way with its employes in the last few years.

However, so much has appeared in print that is without foundation and so many comments and criticisms have been aired through various avenues, that possibly it would be well to give you, by way of preface to an exact explanation of just what we are trying to do and have accomplished, a little history in connection with the company, which may perhaps indicate the trend of things and the conclusions which led up to the inauguration of the so-called profit sharing plan, upon January 12, 1914.

There has always been a prevailing impression, in some quarters, that the so-called profit sharing plan was more or less of a spasmodic thing. It has been said that it was the result of a dare or challenge made in an off-hand fashion by one of the officers of the company and accepted by the executives, and for this reason would ask you to bear with me while I go into a little explanation of things which may not directly concern the work itself that I have been asked to explain.

The Ford Motor Company was incorporated on the sixteenth day of June, 1903, under the laws of the state of Michigan, with an authorized capital of $100,000. There was actually paid in of this amount $28,000.

Some years later the capital was increased from a substantial surplus to $2,000,000 and has remained at this figure ever since.

A little while since the company laid plans to increase the capitalization to $200,000,000 but under the laws of the state of Michigan this amount exceeds the maximum fixed by law, and the plan was defeated, so that this represents the present stock capital of the company.

Eight individuals hold the entire stock issue, Mr. Ford, personally, owning 58½ per cent of the stock.

For the year ending October 1, 1914, the company did a gross business of $119,489,316.99. During 1915 the ending of the fiscal year was changed from September 30 to July 31 and for the ten months between October 1, 1914, and August 1, 1915, the business of the company amounted to $121,000,000.

For at least eight years the plan of the company has been steadfastly towards standardization. A single model chassis with a very limited number of bodies have been built in large quantities with the exercise of exacting thought and care in the development of mechanism and material which were especially adapted to the product. After an exhaustive study and much experimenting, established practices were hit upon that have been improved time and again so far as the choice of material and the production of machines was concerned.

Various schemes have been employed in the handling of labor in connection with output. At the present time we are operating our shop on a day work basis—there is no piece work, premium system or individual bonus plan provided in return for the efforts or outlay of productive or non-productive labor.

We work to standard output. When we change an old operation or put into effect a new system or plan of manufacture, our engineering department draws up the work on a theoretical basis, provides the machines and submits them to the manufacturing or factory department with full data as to the operation of the machines and what the output should be from a theoretical standpoint, making due allowance for mechanical defects and human indifference, as established by experience.

Such machines as the engineering department may select are tried and tested by putting same in actual work, according to directions from the engineering department, and the human or thoroughly practical output is established after adequate test has been made, and it may be interesting to know that within the last twelve months, the human or thoroughly practical production from a factory standpoint, has revealed the fact that our theoretical or engineering ratings ran about 10 per cent low.

For instance, we recently purchased some four way drilling machines for the cylinder department. Our Engineering depart-

ment figured the output of each machine at 200 cylinders per eight-hour day, with a 5 per cent allowance for mechanical defects or handicap, and human indifference to ideal conditions. When these were put out in the shop for trial it was found that day in and day out for two weeks the machines could be run so as to produce in eight hours 210 cylinder in each machine, and therefore the shop rating was placed at 210 versus the engineering department's rating of 200.

Now, we spent a great deal of time and a great deal of thought in arriving at various figures in keeping with all of the factors that enter into any manufacturing problem so far as we knew them up to this point.

It was along in 1912 that we began to realize something of the relative value of men, mechanism and material in the threefold phase of manufacturing, so to speak, and we confess that up to this time we had believed that mechanism and material were of the larger importance and that somehow or other the human element or our men were taken care of automatically and needed little or no consideration.

During that year there were a number of things that happened that made their impression upon the minds of the executives of the company.

I recall a drop hammer operation that had gone along for a number of years at an even output, when somehow, the standard dropped off. The hammer was in good condition, the man who had operated the machine for years was on the job, but the finished output failed to appear in the old proportions that we were looking for and had the right to expect.

A superficial analysis of things brought no light, but a little talk with the operator revealed a condition of things entirely outside of business, that was responsible for our depleted production. Sickness, indebtedness, and fear and worry over things that related entirely to the home, had crept in and had put a satisfactory human unit entirely out of harmony with the things that were necessary for production.

This is the type of incident that played an important part in the conclusions that we reached.

Our first step was to reduce our working day from ten to nine

hours and to give our men an increase of about 15 per cent for nine hours over what they had received for ten.

Following this we instituted a plan for grading employes according to skill, with the idea of eliminating, as far as possible, petty discrimination, misfits, and those unsatisfactory conditions which obtain now and then, possibly through the more aggressive making their worth felt and known than men of more retiring dispositions are wont to do, or to prevent the favoritism of a foreman for an employe, overstepping the bounds of merit or consistency in any case.

The details of this scheme are not hard of comprehension but would require a somewhat lengthy explanation.

Suffice it to say that when we undertook this work we had in the shop some sixty-nine different rates of wage and were employing men at their face value in the employment department, trying them out, and if they did not fit, letting them go.

In the turn-around we established some eight different rates of wage. We classified our men into six groups, which were further subdivided into three each, and a definite wage was applied against every skill rating, so that a man might understand when he came with us just exactly to what extent his developed ability would earn and furthermore, by a very simple means, we put a check upon each individual case, so that he would not have to wait for an increment in recognition of his ability and worth through any one agency, but was automatically looked up in case his advancement did not come within an average time set for such development.

Moreover, we laid down a rule whereby a foreman might eliminate a man from his particular department but could not discharge him from the employ of the company.

If Jones, somehow or other, was a misfit in Smith's department, Smith could send Jones to our employment office where his case would be looked into impersonally. If we found that Jones, in his zeal and desire to obtain a position had done so by misrepresentation (and this occurs very often), we would question him carefully as to his ability and possibly find that in Jones we had put a tailor or tinsmith in our machine shop or heat treat department because Jones, when he stood in line at the employment office door, repeated parrot fashion what the man ahead of him said and secured a job, on the theory that we were needing machinists or help in the heat

treat department and hoping that he could somehow make good and take care of his family, even though he knew he was not fitted for that work.

Now, we have found in these cases that by giving a man a second chance and placing him where he will fit in that we apparently get better men on the second analysis than we have in the first; furthermore, we have found that in teaching a man in any department certain of our *modus operandi*, it is a great deal cheaper for us to take him from one department and transfer him to another than it is to discharge him.

However, if we find that the man is absolutely out of harmony with the work in general, belligerent and unfit, he can, with the approval of our general superintendent and general manager, be dismissed from the company's service.

It may be startling for some of you to know that in the last six months there has been but one man discharged from the Ford organization.

There were a number of other changes instituted in the old way of doing things which because of so much else to tell you I shall have to pass by. Suffice it to say that the good things and the substantial increases that came to the company through their efforts in the directions indicated gave rise to a further consideration of the human element which has resulted in our so-called profit sharing plan.

Now, I should like to impress upon you the fact that this profit sharing work was in no sense instituted as a spasmodic thing, was not designed or conceived for the sake of business expedient or advertising. We were perfectly satisfied with what each man was giving us, as far as daily return was concerned. We did not seek to advertise the car nor the company through this plan, but rather we felt that we owed it to our men at that time to give them all the help we consistently could to better their financial and their moral status, and to insure, as far as we could, a life worth while, and not merely a bare living.

It was established some time prior to this work that a man who comes out of a home well balanced, who has no fear for the necessities of life for those he is taking care of, who is not in constant dread of losing his position for reasons beyond his control, is the

most powerful economic factor that we can use in the shape of a human being.

The profit sharing plan of the Ford Motor Company gives unto every man who can use it within limitations which I shall state, in addition to his wage, a certain amount, according to his worth and what his skill and ability merit for him, to have and to use according to his individual needs for his health and happiness in youth and in old age.

Now, over against each of the eight rates of wage we have set a profit sharing rate, and the lowest total daily income that a worker receives under the profit sharing plan is $5 a day.

This $5 a day, or 62½ cents an hour, is not the lowest minimum wage of the Ford worker; 34 cents is the minimum hourly wage and 28½ cents the minimum share of profits, totaling 62½ cents, which makes a total daily income of $5.

There are three groups under which each employe is considered for profit sharing—these, practically, are all the rules and regulations in connection with the work.

1. All married men living with and taking good care of their families.
2. All single men, over twenty-two, of proven thrifty habits.
3. Men, under twenty-two years of age, and women, who are the sole support of some next of kin or blood relative.

It was clearly foreseen that $5 a day in the hands of some men would work a tremendous handicap along the paths of rectitude and right living and would make of them a menace to society in general and so it was established at start that no man was to receive the money who could not use it advisedly and conservatively; also, that where a man seemed to qualify under the plan and later developed weaknesses, that it was within the province of the company to take away his share of the profits until such time as he could rehabilitate himself; nor was any man urged against his own judgment, likes or dislikes, to change his mode of living and to qualify under that plan if he did not willingly so elect.

The company organized a band of thirty men who were chosen because of their peculiar fitness for the work to act as investigators. The whole work was put into effect and supervised by the employes of the company—no outside talent or assistance was asked. We have worked out the whole scheme with Ford men.

This band of thirty men was commissioned to see each in-

dividual employe and to report as to whether, in their judgment, a man was eligible for a share in the profits. These reports were in turn reviewed by a committee and each case passed upon individually.

As a result of this work our employes were grouped as follows:

First Group

Those who were firmly established in the ways of thrift and who would carry out the spirit of the plan themselves were catalogued as one group.

Second Group

Those who had never had a chance but were willing to grasp the opportunity in the way every man should, were catalogued in the second group.

Third Group

Those who had qualified but we were in doubt about as to their strength of character to continue in the direction they had started in, were placed in the third group.

Fourth Group

And the men who did not or could not qualify were put into a fourth group.

The first group of men were never bothered except when we desired information for annual or semi-annual reports or something of that kind.

The second group were looked up as often as in the judgment of the investigation department, so called, we could help them or strengthen their purpose by kindly suggestion.

The third group were dealt with in much the same fashion, although some detailed plans had to be laid for them.

The fourth group were very carefully and thoroughly studied in the hope that we might bring them, with the others, to a realization of what we were trying to accomplish, and to modifications, changes and sometimes complete revamping of their lives and habits, in order that they might receive what the company wanted to give them.

During the first six months 69 per cent of our force qualified.

At the end of the first year about 87 per cent were on a profit sharing basis, and at the present time about 90 per cent are receiving the benefits under this plan.

Since the start we have had to establish some conditions that were not a part or parcel of this work originally. For instance, we require a man now to be a resident of the city of Detroit for at least six months before he is eligible for employment and then a man must serve six months before he is entitled to a share in the profits,—in other words, payment of the profits start, provided he qualifies, six months after he enters the employ of the company.

At start every man who qualified received his share of the profits as of January 12, 1914, whether or not his individual case was investigated within the month of January or February or March. It so happened that it took us about three months to go over the whole force at the start and there was quite a substantial accumulation of moneys paid to a number of the men who were with us on January 12, but who could not really benefit until March.

The profits are paid to each employe with his wages in his pay envelope every two weeks. He is not influenced or coerced to spend his money for any one especial thing. The policy of the company is not to sell its men anything or influence them to buy anything—with the exception of Ford cars.

Our legal department has been enlarged so that men may come for counsel and suggestion as to ways and means for employing professional help.

As a part and parcel of the legal department also, we have a committee that makes appraisals of property for employes. A man who has picked out a home and gotten a price upon it, may submit the facts to our legal department, and without charge get from them an idea as to the worth of the property in connection with the price asked, also a general report as to the worth of the house, from the standpoint of construction, finishing and equipment.

We are also doing, in connection with the investigation work, something that is of great benefit both to the men and to the company.

Every morning there is turned over from the time department to our investigation staff a list of the absentees of the day previous, which is carefully looked up. If a man is in trouble he gets help; if a man has been wasting his time and himself, he is reminded of

the fact quite forcibly, and is made to feel that to hold his position he must realize the necessity of coöperation.

This little scheme, which is merely eternal vigilance, has cut the number of our daily absentees from 10 per cent to less than one-half of 1 per cent, exclusive of the times when epidemics of grippe, cold, and other human ills prevail, and then it is increased by just the proportion that our men bear to the number afflicted.

It has been no easy task to add to the number of men we originally had, twenty more of the same type and calibre to act as investigators as our forces grew.

Two years ago we were employing some thirteen thousand men; today we have some twenty-four thousand, but we have gained rather than lost in the kind of men and in the spirit and energy shown, as far as this force is concerned.

At the present time we have divided the whole number so that those especially gifted in cases of domestic infelicity might tackle jobs of this type; those who have evidenced unusual skill in handling men with criminal records, are detailed to such cases, and so on.

As you probably know, of necessity rather than choice, a large part of our working force is made up of non-English-speaking men.

It was utterly impossible to reach these men with an explanation of our work through the medium of interpreters, and besides, we found a mercenery unwillingness, if you please, on the part of sophisticated fellow countrymen to aid us in helping this great army of men, which comprised 50 to 60 per cent of the entire number of Ford employes.

We have actually found in Detroit petty empires existing. For instance, we know it to be true that when a group of Roumanians, we will say, arrive in New York, in some way or other they are shipped to Detroit and the knowledge of their coming imparted to someone in our city, who meets them at the station and who confiscates the party, so to speak, persuades them to live in quarters selected for them, to buy their merchandise in markets other than their own choosing and to live unto themselves and apart from the wholesome environment of the city, so that the instigators of all this may benefit through rentals and large profits on food, wearing apparel, etc.

Of course, it is to the interest of such men that these foreigners shall know nothing of the English language, of American ways and

customs, or of local values, as these are things which would liberate them from the bondage (and it is nothing more or less) under which they have unconsciously been placed.

Now, in facing this problem we decided that the only way to work out the things that we wanted to do was to put these men in position to understand directly from us all what we wanted them to know.

You may know, or at least have heard about, the Roberts' system of teaching the English language. It is somewhat of a modification of the so-called Burlitz plan.

We sought out Dr. Roberts—he came to Detroit, and there was organized the plan for giving all non-English-speaking employes a good basic knowledge of the English language through this system.

At the present time we have enrolled in our shop some 1,500, who are taught by volunteer teachers,—foremen, sub-foremen and graduates of the school, who receive in six or eight months, not a lot of grammar or mathematics, or geography, but the ground work of the English language, which enables them to read, write, speak and understand our tongue.

Perhaps this, of all the things that we have done, has been the most beneficial in bringing about the larger results that have been attained, and we know, from the way this work of ours has been extended in our city and through the land that it is perhaps the wisest course that any employer of labor can take to sift and to solve many of the problems that daily confront us.

The fact that in this country of ours we are employing large bodies of men and that for the ordinary task particularly, foreigners have to be employed in order to get the work done would, it seems to me, urge a similar action on the part of other employers of labor.

We have lately been gratified by the action taken by the department of justice. We finish up our course by trying to give to our men some definite conception of law and order to fit them for citizenship, and expend no little effort in trying to show each man the advisability of taking out his naturalization papers.

The department of justice in recognizing this work has arranged through the local federal courts, to accept the Ford diploma in lieu of final examination, other conditions in each individual case being satisfactory.

I have neglected to say what happens to a man who we believe is living unworthily as a profit sharer.

In the first place, if a man is wasting his substance and we feel that the share of the profits is a menace rather than a benefit to him, we take away the share of profits and continue him as an employe, giving him six months in which to rehabilitate himself, so to speak, allowing his profits to accrue during this term.

If at the end of 30 days we find the man's mental attitude to have changed and he requalifies, we give him back his share of profits. If it takes him 60 days he gets back 75 per cent, and 25 per cent is paid into a fund. If a man delays this for 90 days and then comes back he gets 60 per cent; at the end of four months 40 per cent; at the end of five months 25 per cent, and if at the end of six months he has not found the folly of his ways, he is eliminated as an employe of the Ford Motor Company.

The percentage withheld, whatever it be, is used for charitable purposes, within or without the company, the object of this being to prove to men that the company does not in any way want to benefit materially through their loss or shortcomings.

The striking thing about this whole plan, when it is understood, is the simplicity of it all. There is absolutely nothing new or unusual in the way in which it is working or in the policy and layout. We are simply demonstrating over and over again the absolute truth of that ancient adage known as The Golden Rule.

We have learned to appreciate men as men, and to forget the discrimination of color, race, country, religion, fraternal orders and everything else outside of human qualities and energy.

In our plan there was never a measure made as to what might result in so far as increased production and better conditions to the company were concerned, nevertheless there have been such and they are free will offerings, and we want to tell you, in a general way, what the men have done for the company.

In the first place, our men have increased in physical attributes. Do you know that one of the things that we have to contend with most is to keep men from doing too much? Whereas three years ago, we, of the manufacturing department, used to be able to use the phrase "hurry up" in forty or fifty languages or dialects, at the present time this expression is rarely, if ever, heard.

In our motor department there has been a gradual voluntary

increase of production (the general layout and operations being practically the same as before with the same number of men), of from 6,125 motors in a 9-hour day to 7,200 in an 8-hour day.

The assembly of radiator cores, for example, has jumped so that a unit of men, previously putting together 750 in nine hours, now assemble 1,300 in eight, and a single group in the fender department heretofore making 38 fenders in nine hours are today producing 50 in eight.

In the making of gasoline tanks 1,200 for 60 men is the output in eight hours versus 800 by 65 in nine hours.

Many of the methods and schemes used in our factory which have lately helped us so much in cutting out waste motion and lost time, are the direct results of the new spirit in the men and come to us from the rank and file of our employes.

We are finding additional capacity that is willing and always available if justly recognized and amply rewarded.

We used to hire from 40 to 60 per cent of our force each month to maintain it. In the year 1913 between 50,000 and 60,000 people passed through our employment office. In the year 1915 we employed about 7,000, of which number only 2,000 can be used in contrast with the 50,000 mentioned, because the 5,000 were for new jobs and for the enlargement of forces.

As I have previously stated, our daily absentees have decreased from 10 per cent to less than one-half of 1 per cent.

When we started our work our men had in banks, under the old order of things, out of their earnings, a saving of about $1,000,000. At the end of the first year the savings account stood about $3,500,000, and as of January 12, 1916, the figures show a total in excess of six million.

As I have said, good home conditions beget the qualities most desirable for productive factory labor.

On January 12, 1914, Ford employes were buying homes representing a value of three and a quarter million dollars; at the end of the first year this figure had grown to nearly nine million dollars and upon January 12, 1916, we found the valuations of homes being purchased by Ford men in excess of twenty million.

We were fearful lest this plan of ours might possibly encourage extravagance and also because of our endeavors to better the quality and kind of homes that we might have increased the rentals and

household expenses. It was extremely gratifying therefore, at the end of the first year to find that the amount of monthly rentals paid had increased less than 5 per cent, although approximately 13,000 Ford families had moved to better their surroundings and to gain more of comfort and health, of which 5,000 were classed as exceptionally poor.

A map has been prepared of the city which we have divided into districts, each district characterized by its physical environment and the kind of inhabitants. This has been so maintained through the directory we have, as to form most convincing proof of the whole-souled response made by our men in the direction of our aims and desires. I would like you to know that one of the greatest crimes a man of the Ford organization can commit is not to keep us posted as to change of address.

You may be curious to know what our policy is with regard to ex-convicts, men who have lost an eye, an arm, speech, hearing, or both, and other human derelicts that perhaps you have read of our having employed.

We have, for example, set aside 1 per cent of all the positions we have for men whom we believe want a second chance in life, of the criminal type, with or without prison records. We have also found work that men past middle life can do; we have also positions for men without an arm, or who have lost a leg. Again, we have some 20 deaf and dumb operators—the quickest and brightest group of 20 that we have anywhere in the shop.

Now, there is in this, as we have found, a twofold result:

We are helping a man, who with the proper kind of encouragement is working out his own salvation and helping us with our problems, and in some cases much more intelligently than men in the average walks of life, and in the second place, we are discouraging the kind of experience that the man is trying to shake off, in others, and are ridding the community, perhaps in small part, of the tremendous load that is being carried in caring for men of this type in the county, state and municipal institutions.

What is here said may be taken at a considerable discount but it would afford us much gratification and pleasure if as many as are interested, either in improving factory conditions, or bettering the standing of our fellow men, or best of all perhaps, getting a

different viewpoint of life for yourself and much of personal enlightenment, if you would come to Detroit and see our work at first hand.

We should be very glad to have you and extend you a cordial welcome at any time this may be possible.

I know that too often we face things that we want to do from the angle of fear; fear that we are going to disrupt things that are running quietly along; fear that in aiming at a desired goal we may run foul of things that will perplex and hinder and overshadow the good that we want to do.

As I told you at the start, the Ford Motor Company have done all this work with their own men; there has been no theory used; no mapping out of various courses that we have pursued; we have employed no minds trained in philanthropy or sociology, or any other knowledge gained through books or university courses. We have rather fed our men, so far as we could, with fresh human encouragement, in a sane, sound, man-fashion way and we believe that no work of this kind will ever be successful if it is wished on some employe to accomplish, without it has back of it and around it the spirit and touch of the personal dynamic that guides the business and is responsible for it.

BOOK DEPARTMENT[1]

INTERNATIONAL QUESTIONS

BABSON, ROGER W. *The Future of South America.* Pp. viii, 407. Price, $2.00. Boston: Little, Brown and Company, 1915.

The avowed purpose of the author of this book is to write an account of South America that will appeal to commercial and industrial interests in the United States. His sources of information are derived from observation gained on business visits to most of the South American countries, personal interviews with business men and public officials, and studies of statistical data. The chapters treat of all the South American countries in turn, with the exception of the Guianas, as well as of the West Indian Islands, particularly Cuba, Porto Rico and Santo Domingo. Two final chapters are devoted to Mistakes in Our Latin American Trade Relations and South American Investments.

In general, the author's tone is one of large optimism toward the future of South America and South American-United States commercial relations. In the introductory chapter he says: "the people of the United States are not getting the truth about Latin America. Only the good news is sent out." But one feels in reading the text that disadvantages have often been overlooked or ignored in the author's discussions. Failure of large trade development between Latin America and the United States is placed by the author almost wholly upon the American business man or the American government. Much space is given to interviews with government officials. Such interviews in Latin America, as in many other continents, are generally not the best means of securing the whole truth regarding social, economic and commercial conditions in a country. The book is filled with many misstatements of fact and many generalizations that it would be difficult to prove. There are, on the other hand, many suggestions regarding the development of United States trade with South America that the American business man would do well to study and follow.

University of Pennsylvania. G. B. ROORBACH.

BULLARD, ARTHUR. *The Diplomacy of the Great War.* Pp. xii, 344. Price, $1.50. New York: The Macmillan Company, 1916.

This work is divided into four books: (1) The Struggle of a Generation—a sketch of European diplomacy from 1878 to the present war; (2) The New Elements of Diplomacy—a discussion of the rights of nations, their methods of diplomacy, of colonization and the growth of public opinion; (3) The Liquidation of the War—its probable outcome, the demands of the various states and the

[1]The notes and reviews on the following subjects will appear in the July issue of *The Annals:* Agriculture, Mining, Forestry, and Fisheries; Commerce and Transportation; General works in Economics; Geography; Political and Governmental Problems; Miscellaneous, Money, Banking and Finance, and such notes and reviews on Sociology and Social Problems as are not included in this issue.

problems resulting from the war; (4) The United States and Europe—our traditional policy, our problems, defence, and our part in establishing peace.

The author admits a possible bias—"a very definite fondness for France" and an aversion to Germany—but such candor does not lessen our confidence in his honest attempt "to see straight," for no one can read his book with an open mind and not feel that he tells the truth so far as it can be determined by historical evidence; and on the speculative side—the second half of the work—he frankly tells us "I can cite no evidence for my beliefs" (p. 150). If further proof were necessary to convince the reader of his fairness—and that is the most important point to determine in a work dealing with the present war—it may be found in the chapter on the Algeciras crisis in which he states that the Entente violated sacred pledges and acted against the interests of Germany. The division of Egypt between England and France; of Persia, between England and Russia, are no more excused than is Austria's aggression in the Balkans or Germany's violation of Belgium. "Great Britain and Germany have both violated their pledges of The Hague by armed invasion and occupation of neutral territory" (p. 297). Peace, he concludes, can only come when each nation frankly yields to the discipline it proposes for others, when an enlightened system of education shall have democratized foreign policies. We in America must first set our own house in order and when we have done so a league of American Republics may set an example to the rest of the world.

Oberlin College. KARL F. GEISER.

GOLDSMITH, PETER H. *A Brief Bibliography of Books in English, Spanish and Portuguese, relating to the Republics commonly called Latin American, with comments.* Pp. xix, 107. Price, 50 cents. New York: The Macmillan Company, 1915.

HERRICK, ROBERT. *The World Decision.* Pp. 252. Price, $1.25. Boston: Houghton, Mifflin Company, 1916.

BRAILSFORD, HENRY NOEL. *The War of Steel and Gold.* Pp. 340. Price, 80 cents. New York: The Macmillan Company, 1915.

The world decision is a choice, not between Anglo-Saxon and German civilization, but between Teuton and Latin ideals, according to the author, and his choice is decidedly the latter. With great praise for the Latin, little knowledge or appreciation of the German ideals and general disgust for the American attitude toward the war, he vividly describes his experiences in Italy and France during four months of the war, and comes to the conclusion that Germany is a menace to the world and any peace which does not destroy that menace can neither be lasting nor for the common good. It is written in a passionate, forceful style, but its chief value is rather in its description of conditions, men, and races than in its discriminating analysis of the forces and motives underlying the world war.

Mr. Brailsford's book, on the other hand, is an admirable discussion of world politics, of the real causes of the war, of the stakes of diplomacy, the balance of power, the forces which control foreign policies, especially the part played by finance. The original work was written before the war. To this, the third edition, the author has added a postscript on peace and change with occasional notes to the original chapters, and a tentative outline of a federal league. It

is a keen analysis of the economic problems of imperialism, war and peace, written in a brilliant style with a masterly grasp of the vital issue. It is the best book of its kind that has recently appeared.

K. F. G.

JONES, J. H. *The Economics of War and Conquest.* Pp. xvii, 160. Price, 2s. 6d. London: P. S. King & Son, 1915.

This work is designed as a scientific study of the contention of Norman Angell, as set forth in *The Great Illusion*, that under modern conditions a nation can gain no economic advantage through war. With keen analysis, the author points out the flaws in Mr. Angell's argument, and shows the gains that may accrue to a nation through the possession of a powerful armament, the imposition of an indemnity, or the annexation of colonies or contiguous territory. Some of these alleged advantages appear to be of doubtful value or of trivial nature. Others are very real. There would seem to be some which the author does not mention.

In view of the amount that has been written upon this subject by those without a knowledge of the principles of economics, a discussion by one who has such knowledge is particularly valuable. As a whole, the work successfully supports the author's conclusion that while some economic gains may be achieved by means of a war of conquest, the money value of the expectation of such gain is considerably less than the money cost of such a war.

W. L. A.

LABOR PROBLEMS

ANDREWS, IRENE OSGOOD. *The Relation of Irregular Employment to the Living Wage for Women.* Pp. 127. New York: American Association for Labor Legislation, 1915.

This is a statistical study showing the discrepancy between the rate of wages paid and actual earnings received in certain industries employing women—a factor of considerable magnitude in considering the application of the minimum wage. Facts from many lines of production, such as paper box, clothing, candy, and book-binding industries are given.

The convincing thought driven home shows that not only the rate of pay, but the regularity of employment, must be taken into minimum-wage discussions if we are to have a real living wage for women.

C. R.

BARNES, CHARLES B. *The Longshoremen.* Pp. xvii, 287. Price, $2.00. New York: Survey Associates, Inc., 1915.

The prevailing public opinion that longshoremen are a shiftless lot of unskilled labor—a class of unworthy ne'er-do-wells—must change radically if it is to agree with the facts brought out by the author's investigation. The nature of longshoremen's work is found to be dangerous, hard, and highly irregular; demanding intelligence, experience, and good judgment.

The study lays stress upon methods of hiring, the irregularity of employment and the inadequacy of the wages paid—the annual earnings ranging from $520

to $624. The growth, activities, and failures of labor organizations are treated at length, giving a clear illustration of the effect of racial characteristics in breaking up labor solidarity. The closing part of the book deals with the many risks that constantly surround the worker.

The book is suggestive in showing the need for a greater detailed and more comprehensive study of longshoremen, so that both public opinion and legislation may compel a much needed improvement.

C. R.

COHEN, JULIUS HENRY. *Law and Order in Industry.* Pp. xvii, 292. Price, $1.50. New York: The Macmillan Company, 1916.

The protocol—the arrangement for industrial peace in the cloak and suit industry of New York City,—was discontinued in the first week in March. This volume discusses this subject and is consequently exceptionally timely. As an introduction the author describes the cloak and suit industry and the chaos of the great strike of 1910, together with the agreement that closed it. There follows a detailed study of the problems confronting employers and employes under the plan. This provided for the preferential shop, with full representation of employes on all committees. Machinery for the adjustment of disputes was provided—a board of grievances composed of representatives of the two sides. From this board either side might appeal to a board of arbitration whose chairman represented the public. More important, perhaps, than this machinery for the settling of disputes was the joint board of sanitary control which supervised the health of the industry. During the five years of its existence it has done much to improve the sanitary conditions of the work-shops and to raise the physical condition of the workers. In the appendices of this book are the important decrees of the board of arbitration and also the initial agreements.

The protocol should be carefully studied by all who deal with labor or are interested in the labor problem. This volume should make the facts available to a large number of persons. The author was in close touch with each step in the development of the experiment, and, as attorney for the manufacturers, helped to draft the original agreement. This fact, however, has not influenced his judgment but has made it possible for him to know all important details.

New York City. ALEXANDER FLEISHER.

COMMONS, JOHN R. and ANDREWS, JOHN B. *Principles of Labor Legislation.* Pp. 524. Price, $2.00. New York: Harper and Brothers, 1916.

The increasing number of laws dealing with labor has brought the need of a restatement of the principles on which the various prohibitions and restrictions that seek to protect the worker in industry are based. Under the headings, The Basis of Labor Law, Individual Bargaining, Collective Bargaining, the Minimum Wage, Hours of Labor, Unemployment, Safety and Health, Social Insurance, and Administration, the authors discuss these principles. There is detailed classification and analysis of each subject under numerous sub-headings after the historical background of the legislation and the main facts in regard to the need have been made clear. Foreign experience is cited but the emphasis throughout

is on American conditions and problems. The sub-titles of the chapter on the Minimum Wage indicate the approach: the economic basis, historical development, standards, methods of operation, results, constitutionality. Of each of these classifications there are again numerous sub-divisions.

The attitude of the authors is frankly progressive. They believe that there are many conditions in industry, detrimental to the workers, that can be remedied by legislation. But the book is practical throughout. It outlines the problem, points out how legislation has been developed to curb it and then examines the effect of such legislation on employer, employe and the public. The enforceability of a law is in each case the final measure of its value—"a law is really a law only to the extent to which it is enforced." For this reason, the main emphasis throughout the volume is on the problems of administration. This subject is also treated in the concluding chapter. Here are discussed the place of the executive, legislative and judicial branches of government in the enforcement of labor legislation, but a greater amount of space is given to the recently developed Industrial Commission.

The struggle between the fundamental principles of the rights of the individual as guaranteed under the constitution and the police power of the state is clearly shown. It is the problem of determining the limits of these rights that has been one of the important problems of our courts.

A critical bibliography and a list of the cases cited, is appended. These should prove of value to the student.

This volume should become a text-book for college classes. No other book so adequately covers the field with which this deals. Its sphere of usefulness, however, should be wider than this. It should appeal to the citizen who by it will be furnished with a guide to the mass of bills presented to each succeeding legislature. He will as a result of his reading be better able to judge what is valuable and what is practicable among the measures suggested.

New York City. ALEXANDER FLEISHER.

DIEMER, HUGO. *Industrial Organization and Management.* Pp. xv, 291. Price, $2.00. Chicago: La Salle Extension University, 1915.

This book divides the problems of management, especially manufacturing management, into seventeen main fields and devotes a chapter to each. Types of Organization, Receiving, Storing and Recording Materials, Planning, The Distribution of the Expense Burden, Standardization, and Wage Systems are typical chapter headings. These discussions are supplemented with clear and direct, though rather simple test questions, and frequent charts and diagrams.

Professor Diemer has performed a real service to managers as well as to teachers of management by thus making available his years of study in the management field. His practical experience has enabled him to be always definite and specific—a good quality that is not carried to such an extreme as to obscure with details. The point of view of the man in the factory and the man outside are excellently combined.

J. H. W.

GANTT, H. L. *Industrial Leadership.* Pp. 128. Price, $1.00. New Haven: Yale University Press, 1916.

This book is a collection of five addresses delivered in 1915 in the Page Lecture Series before the senior class of Sheffield Scientific School, Yale University. Mr. Gantt believes that industry follows an evolution similar to that of politics, and that just as democracy is a higher, more noble form of government than autocracy, so too industry may be conducted on a higher plane than that of driving men like scourged quarry slaves. Force in industrial management must yield to democracy, like force in civil life has yielded to that same conqueror.

To accomplish democracy in industry requires two things: leaders whose authority to issue orders is balanced by knowledge and responsibility to see that the orders are properly executed; and secondly, a training given to the workmen so that each man may have the opportunity to become a leader himself. These ends may be attained by a rigid investigation of the work to be done, the elimination of unnecessary operations, the establishment of proper conditions of work and then the setting of definite, fairly difficult tasks for workmen, with a suitable reward when a task is accomplished. In order that the tasks may be executed it devolves upon each industry to train its own work people, and upon the state to educate boys and girls in those matters which are common to all industries, or which cannot be given by individual employers. Finally the commercial side of a business must be brought into harmony with the production end, and a correct system of distributing costs devised.

These are Mr. Gantt's views as to the way to make a nation great through its men rather than because of its wealth; and through democracy rather than autocracy. Unfortunately, Mr. Gantt is not as expert in organizing his writing as he is in creating a system of management. He knows the value of a plan in a factory but evidently does not realize that a logical outline is a necessary prerequisite for making a book. To a reader of penetration, and one possessed of a knowledge of Mr. Gantt's earlier book *Work, Wages and Profits*, this latest effort is an interesting piece of industrial philosophy, but to other readers it is quite apt to be a puzzle, all the more complex because oftentimes it looks easy of solution.

MALCOLM KEIR.

University of Pennsylvania.

HOXIE, ROBERT FRANKLIN. *Scientific Management and Labor.* Pp. x, 302. Price, $1.50. New York: D. Appleton and Company, 1915.

This book attempts to be an analysis of the effect of scientific management on labor and is based on Professor Hoxie's investigation of that subject for the United States Commission on Industrial Relations. The method pursued was approximately as follows:

Thirty-five shops and systematizing concerns who made more or less pretense to being run on a "scientific management" basis were examined, and interviews were had with many prominent exponents of scientific management. On a basis of these studies, a list of the labor claims of scientific management and similarly, a list of the trade union objections to scientific management systems were prepared.

The vital points at issue which appeared from a comparison of these lists are analyzed.

The author's conclusion is indicated as follows: "Neither organized nor unorganized labor finds in scientific management any adequate protection to its standards of living, any progressive means for industrial education, or any opportunity for industrial democracy by which labor may create for itself a progressively efficient share in efficient management. And, therefore, as unorganized labor is totally unequipped to work for these human rights, it becomes doubly the duty of organized labor to work unceasingly and unswervingly for them, and, if necessary, to combat an industrial development which not only does not contain conditions favorable to their growth, but, in many respects, is hostile soil."

It is unfortunate that such an opportunity as was afforded for this investigation should have been partially lost by adopting a method that is distinctly unfair to scientific management. The unfairness grows out of the fact that scientific management accomplishment is contrasted with the claims and ideals of scientific management, and condemned because of its failure to attain them. Surely anything under the sun could be condemned on that ground, for nothing that is still growing has attained its ideal.

Dr. Hoxie does not compare the general level of labor conditions in scientific management plants with general labor conditions among non-scientific management plants, which would seem to have been the only fair method of treatment. He seems also to have overlooked or at least much understressed the very striking conditions in a small group of scientific management plants that lead in the development of their personnel work.

It may be a just criticism that in practice scientific management has often failed to properly weight the human factor. It may not prove to be a substitute for collective bargaining. It unquestionably does involve a rearrangement of the method of attack of organized labor. Nevertheless, the accurate, scientific knowledge collected under scientific management, can hardly fail to emphasize the importance of having proper conditions surrounding employment. The fact that the relatively few scientifically managed plants furnish some of the very best examples of good labor conditions is an evidence that this is the case. Moreover, there are at present plenty of evidences that scientific management is throwing more and more emphasis on the scientific study and importance of right labor conditions.

JOSEPH H. WILLITS.

University of Pennsylvania.

SOCIOLOGY AND SOCIAL PROBLEMS

ELDER, B. *Study in Socialism.* Pp. xviii, 328. Price, $1.00. St. Louis: B. Herder, 1915.

This attack on Socialism is the first of a series of text-books on social problems that the author has in preparation. The main headings of the volume are The Principles of Socialism, The History of Socialism, The Aims of Socialism. Under

these, the theories and aims of Socialism are carefully analyzed. The footnotes and bibliography show a wide study of the literature of Socialism. In comparison with this, the knowledge of the literature of opposition is comparatively slight. For example, the attacks of the Austrians find no place in his criticism of the labor theory of value. Moreover, there appears to be a failure to grasp the idealism of Socialism and the educational value of the organized socialist movement. The increasing amount of coöperation in industry so much emphasized by Socialists is ignored; competition alone is considered.

A. F.

KELLER, ALBERT GALLOWAY. *Societal Evolution.* Pp. xi, 338. Price, $1.50. New York: The Macmillan Company, 1915.

A serious and stimulating work written in the belief that social science needs an evolutionary orientation similar to that given by Darwin to the natural sciences. Professor Keller, a colleague and disciple of the late Professor William Graham Sumner, rounds out the incomplete conception of the great teacher.

Human institutions, societal forms, arise not in the happy fashion of Spencer's philosophy, rather in the fashion of Darwin's facts. They are a slow painful development. Social variation is within the folkways, and social selection is a process of selecting the best folkways and mores as determined by the survival process. In this way Keller has developed the idea that our institutions and customs have come to be what they are by the methods of variation, selection, transmission and adaptation, as truly as natural organisims—indeed a stimulating theme to develop. Professor Keller has written one of the more important contributions to objective social psychology.

L. B.

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STEADYING EMPLOYMENT

WITH A SECTION DEVOTED TO SOME FACTS ON UNEMPLOYMENT IN PHILADELPHIA

The investigation forming the basis for this study was carried on in the Department of Public Works of the City of Philadelphia

BY

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PHILADELPHIA
THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE
1916

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Public officials and committees without number have been commissioned to study the abnormalities of unemployment. But not until 1915, when Morris Llewellyn Cooke, then Director of the Department of Public Works of the City of Philadelphia, assigned to Mr. Joseph H. Willits this duty, had there been, at public initiative and with the facilities of a public office, a thoroughgoing study of the normalities of employment and the relation of industrial management and industrial policies to unemployment.

Mr. Willits' report to Director Cooke was first published in a small edition by the City of Philadelphia. Because of the limited number of copies originally issued, because this supply is now exhausted, and because of the valuable nature of the study, the Academy republishes it here in a revised form. It is particularly appropriate and valuable as a supplement to the larger volume on "Personnel and Employment Problems in Industrial Management."

CLYDE LYNDON KING,
Editor.

FOREWORD

In December, 1914, a meeting of business men was called by Mayor Blankenburg with a view to seeing what steps the Philadelphia community should take with regard to its unemployment problem. This meeting was attended by Samuel Rea, President of the Pennsylvania Railroad; J. Howell Cummings, President of The John B. Stetson Company; J. W. Van Dyke, President of the Atlantic Refining Company; Franklin Brewer, General Manager of Wanamaker's; Louis J. Kolb, of the Kolb Bakery Company; Joseph Steele, of Wm. Steele & Sons Co., builders; Louis Bloc, of the Ford Motor Company, and several members of the Mayor's cabinet.

The number of men and women out of employment had at that date not reached so high a total as was experienced during the following January and February. The meeting was called together with the thought of taking all possible steps which might act to minimize the ultimate amount of unemployment. A number of suggestions as to possible lines of action were made. It was the concensus of opinion that the agencies then at work would give the maximum of relief to the immediate situation. The conference felt that the municipality should rather acquaint itself with the problem in its broader aspects, to find out what other municipalities were doing in this matter, and to make a general study of the problem of unemployment such as would suggest what steps might be taken to minimize it in the future in Philadelphia. As there was a vacancy then existing in the position of General Inspector, Office of the Director, Department of Public Works, and as this position was exempt under civil service rules, it was suggested that this vacancy be filled by the appointment of a student of economics qualified to carry on an inquiry into each of the phases of the general unemployment problem.

This suggestion having received the unanimous approval of the conference, and after several weeks of search for the right man, announcement was made of the appointment of Joseph H. Willits, 4519 Sansom Street, Instructor in Industry in the Wharton School

of Finance and Commerce of the University of Pennsylvania. The selection of Mr. Willits was approved by his associates in the faculty of the Wharton School and he was given an eight months' leave of absence in order to give his undivided attention to the work.

In this report it will be noted that an effort has been made to get down to the basic causes of unemployment and to describe a standard, which it is believed will, during the next generation, be forced upon any industrial community which is to compete in any large and successful way with sister communities at home and abroad.

Grateful acknowledgment is hereby made to those employers and employes (as well as others) whose courtesy and coöperation made possible the gathering together of the information which makes up this report. The almost unanimous desire of employers not to have their names mentioned in connection with information furnished makes it unfortunately necessary that cases shall be referred to anonymously.

Signed,

MORRIS L. COOKE,

Director.

INTRODUCTORY NOTE

At the outset of this report attention is called to the difference between the unemployed person who can and will work, if he has the chance; and the unemployed person who is unable to work through physical incapacity, or who would "starve to death alongside of a job before he would work at it." The larger amount of advertising that these, "the unemployables," receive, blinds many citizens to the very existence of the first class. From the point of view of immediate community welfare, the problem of the first class is the more important, for it is the degenerating effect of this form of unemployment that drives many self-respecting and capable workers into the "unemployable" ranks. This report primarily has reference to the "unemployed." The handling of the second class is largely, though not altogether, a sociological, not an industrial problem.

JOSEPH H. WILLITS.

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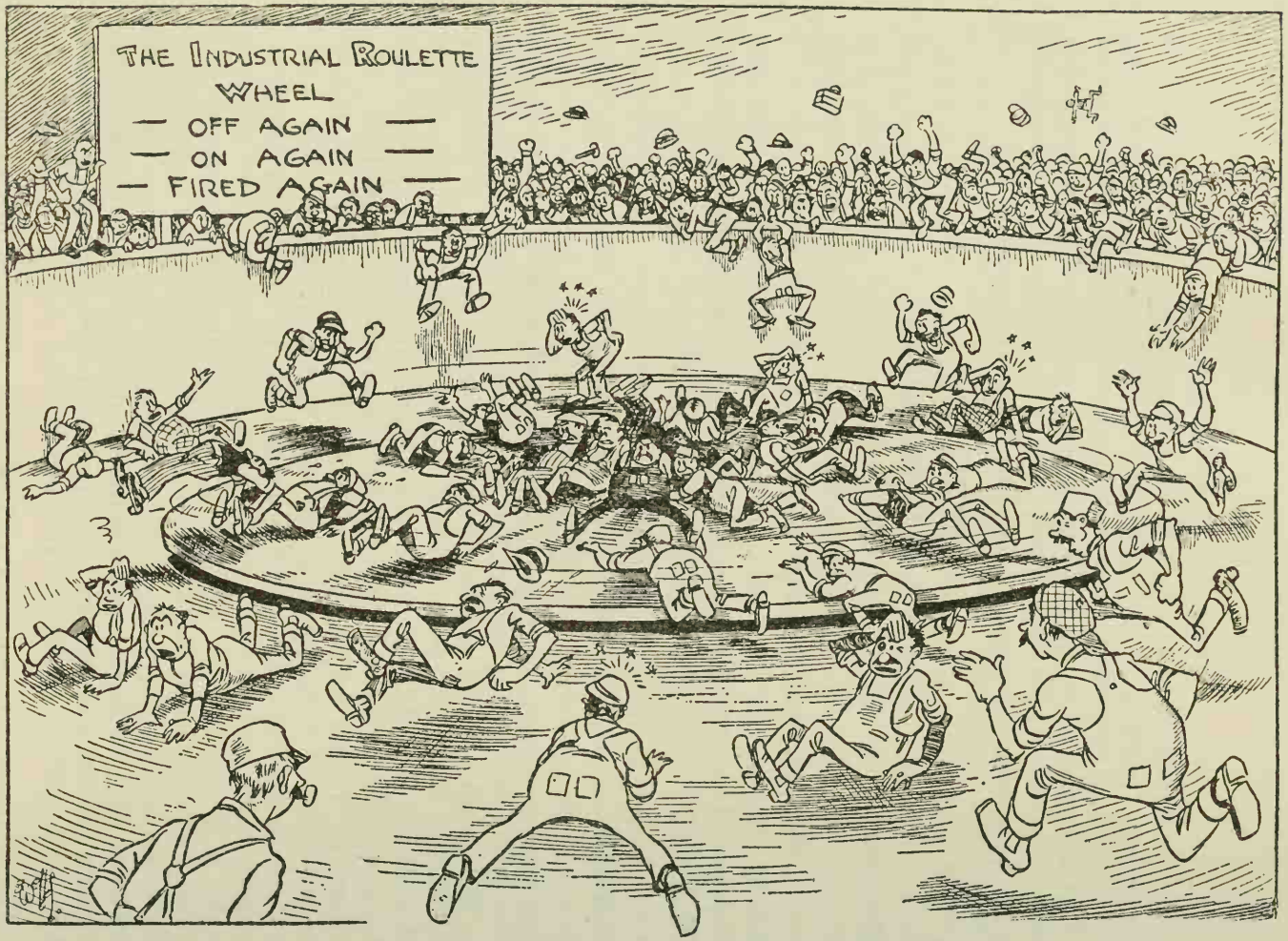


In industrial concerns employes are continuously coming and going. The number hired and fired is out of all proportion to the number employed. The average concern hires as many new persons during a year as it employs regularly. Such an excessive hiring and firing is costly to employers, has a degenerative effect on employes, and is one of the basic causes of unemployment. (See page 63.)

PART I

FACTS OF UNEMPLOYMENT IN PHILADELPHIA

The most fundamental fact about unemployment in Philadelphia or any other American industrial center is that we know practically nothing about it. We do not know its extent; whether it is increasing; in what industries it exists; just what are the different causes that bring about lost time; nor just how unemployment affects the worker's standard of life, his work and his citizenship, as well as the efficiency of the plant. Not only do we not know, but we do not have any available information to which we can turn. So far as definite knowledge is concerned, we are still "up in the air."

The information collected by the various branches of government—national, state and city—is still most vague and general in character. Every ten years the representatives of the United States Census come to Philadelphia and collect figures which show for one year the number of wage-earners engaged each month in each separate industry.[1] The State Department of Labor and Industry at irregular intervals collects from a large number of representative firms a statement of the maximum and minimum number employed during the year, and the dates on which these high and low points in employment occurred.[2] Such information, while it is a step in the right direction, throws but the barest light on the extent, nature and causes of unemployment. The only local investigations have been made by the Consumers' League and by Phipps Institute. Since these investigations were not primarily concerned with unemployment, the information furnished on that subject is necessarily scanty.

The lack of definite knowledge goes deeper than the absence of public reports, statistics and investigations. A large percentage of employers have made little analysis of their own unemployment problem. They do not have available for their own or

[1] Twelfth U. S. Census, Vol. 8, *Census of Manufactures*, pp. 276–281.

[2] State Department of Labor and Industry, Bulletin on Variation in Employment.

any one's else use data or information which show the extent and causes of lost time in their plants. Until such information is collected, our knowledge of the causes and nature of unemployment will remain in a very nebulous state. Very few of the labor unions keep any record showing even the amount, much less the effect, of unemployment; and only a small proportion of the records that are kept are thorough enough to be reliable. Moreover, the unions are apt, as a matter of policy, to exaggerate the amount of unemployment in good times. Conversely, in bad times, the fear that the strait of the workers, if known, may be used as a favorable opportunity to lower wages, leads labor unions to conceal the real facts. Finally, the figures, even if complete, would present information for but a small minority of the total body of Philadelphia wage-earners.

The value of individual firms and of unions as sources of information is still further lessened by the hesitancy that many employers and some labor unions have of giving information to the public. The unions fear that the employer will find out something about the organization which he may use to its injury. The employers, as a rule, fear that information which may be used to their injury, will reach business competitors, employes, or some regulating government agency. Most of the information for this report obtained from employers has been secured under the promise not to mention the name of the firm or the individual. The results of this "hush" policy make the study of unemployment very much like a case of "blind man's buff."

Aside from these vague sources, Philadelphia's information about her own unemployment is confined to what appears in the newspapers or is passed around by word of mouth. Our ignorance is abundantly evidenced whenever the amount of unemployment rises above the normal, by the wide variation shown in the "estimates" of the number of unemployed that appear from one source or another. For example, during the winter of 1914–15, the estimates of the number of unemployed in the city ranged from 50,000 to 250,000. No one knew the accurate guess from the inaccurate one; no one could tell the honest guess from the one that was deliberately faked. We were at sea between the exaggerations, on the one hand, of the calamity howler, and the exaggerations, on the other hand, of the conscious preacher of

optimism. Small wonder that many sincere persons were at a loss to know to what extent the city was justified in resorting to ultra-heroic measures.

Not until the end of the summer months—long after the time for decision was past—was the public as a whole put in possession of information that gave a more definite idea of the extent of unemployment. In order to throw a little more light on the amount and sources of unemployment during the past winter, the Metropolitan Life Insurance Company was invited, by Mayor Blankenburg, to conduct an unemployment canvass among the families of those who held policies in the company. The Metropolitan Company placed the City of Philadelphia under obligations to itself by agreeing to aid, and lent its splendid organization for the purpose. The canvass was conducted during the week beginning March 15, 1915, by the agents of the company from each of the company's branch offices.

In this study the agents of the company called on 78,058 families, in which were 137,244 wage-earners,—about 18 per cent of all the wage-earners in the city. Of the wage-earners canvassed, it was found that 10.3 per cent were entirely out of employment and that 19.7 per cent in addition were working part time.

Canvasses conducted in other cities by the U. S. Department of Labor Statistics point to the conclusion that the Metropolitan figures are typical for the entire city. If that be so, there were in Philadelphia in the middle of March, 1915, approximately 79,000 unemployed and approximately 150,000 part-time wage-earners. It is significant that the state of affairs as revealed by the above figures was less severe than in most other large cities where similar canvasses were conducted.

This canvass disclosed the fact that the textile industries and building trades furnished the largest number of unemployed; of whom over one fifth had been out of work over six months. In less than one fourth of 1 per cent of the cases was unemployment due to strikes or lock-outs.

The Permanency of Unemployment

The absence of dependable information about our own unemployment limits discussion, in most instances, to general statements. Data can be used chiefly for purposes of illustration

Chart showing the variation in the amount of money relief furnished during seventeen months by the Philadelphia branch of the society for Organizing Charity. The unshaded portion shows that part of the relief which was furnished because of impossibility of securing employment on the part of those who were able to work - in the opinion of the Society's investigators. Note the fairly constant size of the relief furnished for causes other than unemployment and the great irregularity of relief furnished unemployment - almost none at all in the summer months
May 1 to May 31
Apr 1 to Apr 30
Mar 1 to Mar. 31
Feb 1 to Feb 28
Jan. 1 to Jan 31 (1915)
Dec 15 to Dec 31 (omitted)
Nov 15 to Dec 14
Oct 15 to Nov 14
Sept 15 to Oct 14
Aug 15 to Sept 14
July 15 to Aug 14
June 14 to July 15
May 15 to June 14
April 15 to May 14
Mar 15 to April 14
Feb 15 to Mar. 14
Jan. 15 to Feb 14 (1914)
$6500
$6000
$5500
$5000
$4500
$4000
$3500
$3000
$2500
$2000
$1500
$1000
$500

FIGURE 1

rather than as comprehensive summaries of an entire situation. However, this fact stands out: unemployment is permanent, if not steadily increasing. When we ordinarily assume that men and women who are willing and able to work are minus a job only in times of unusual and widespread industrial depression—such as we experienced during the last winter—we lose sight of the fact that there is always, even in the most prosperous times, a large amount of unemployment and part-time employment for these same workers. In the long run, this permanent or "chronic" unemployment totals larger than the unemployment of the severe industrial crises. This is true because the former exists continuously, year after year; whereas a crisis usually occurs only once in a period of five, eight or ten years. Moreover, from the city's standpoint, this chronic unemployment is of greater concern because it arises chiefly from local causes.

The Society for Organizing Charity testifies that there is always in "good" years and "bad" alike, a considerable number of applicants for aid who, though willing and able to work, are forced to seek charitable assistance because of the impossibility of securing employment. Fig. 1 shows the total amount of relief granted by the Society for Organizing Charity each month during 1914 and to May, 1915; and, of this total, the percentage which was due to unemployment. In many cases, undoubtedly, other causes have contributed to throw these applicants onto charity after merely a brief period of unemployment; but this fact does not detract from the evidence shown by the chart of a considerable amount of unemployment always present.

As a result of over one hundred interviews with the managers of business houses and social workers, and as a result of studies made in individual industrial plants, information has been collected which indicates the permanence of unemployment. This also indicates roughly those industries in the city in which unemployment is normally a large factor.

A. The Textile Industry

Of Philadelphia industries, the textile and clothing manufactories show unemployment and part-time employment at their worst. In the textile industries, the fact which immediately strikes the observer is that, although very many more workers are unem-

ployed in industrially "bad" years, yet there is always, even in the most prosperous years, a very considerable percentage of the workers who are either entirely idle or working from one to five days a week. Mr. R. R. P. Bradford, whose sixteen years' experience in charge of the "Lighthouse" (a social center for the better class of workers in Kensington) has given him an unusual opportunity to become acquainted with the facts, says:

> We make the mistake of assuming that unemployment is a question solely of severe bad times. It is true that conditions are worse at such times—they even approach the destructiveness of a flood or an earthquake. But it is true that unemployment and part-time employment is a situation that is with us to a very considerable degree practically without cessation. If it is not one industry, it is another. If one mill escapes, another is hit. The fear of unemployment and part-time employment hangs, a permanent pall, over Kensington.

It is worth while to point out two general conditions that especially contribute to permanent unemployment in the textile industries. First is the constant shift of demand from one type of textile fabric to another. The industries that have been built up to supply products no longer demanded by the market must gradually die out, or readjust themselves to a new demand. During the decadence of these industries, the numbers of workers that have been attracted to the industry is greater than can now be kept busy. These employes hesitate to leave the industry for some other, probably uncertain and unaccustomed, line: conditions may improve in their own trade. Moreover, under existing circumstances in industrial plants, they feel that the skill acquired by years of work in their own trade will be sacrificed, and many are too old to risk the change. An excess of workers is, therefore, characteristic of a declining industry. A long period of part time and of unemployment, often running into years, results.

A second condition that contributes to irregularity in employment, and is very much more important now than it was twenty years ago, is the growing tendency—especially in hosiery, higher grade carpets and fancy dress goods—to manufacture solely "on orders." Twenty years ago a manufacturer made carpet or hosiery or cloth and then went out and sold *that* carpet, or hosiery or cloth. Today the order comes in for a particular design, with a certain kind of yarn or silk and a certain number of threads to the inch, and the manufacturer makes that particular order. Formerly a manu-

facturer produced standard makes of his particular line and simply piled up stock in his warehouse in the off-season. When the orders began to come in thick and fast, at the proper season, he was ready for them and simply used up his stock. Today manufacturers make, as a rule, very little to stock and run chiefly on orders. The result is that manufacturing has become nearly as irregular as the orders. When an order comes in, or especially when orders come in thick and fast at the proper season, there is a period of feverish activity until they are delivered, and then probably a long period of total or partial unemployment. A number of workers were interviewed in their homes in a block in which live the more industrious middle class workers in Kensington (hereinafter referred to as Block "K"). The experience of one man (a warper) in this block represents a situation prevailing in a large percentage of the textile factories.

"The second week after I was employed at....., I was called on to work overtime four nights till 9 o'clock at night. On Saturday of that week, I, with four others, was laid off for lack of work."

The prevalence of unemployment is forcibly illustrated in the different branches of the textile industry in Philadelphia.

1. *Lace and Lace Curtains.* The last ten years has witnessed a steady increase in unemployment in the lace, and particularly in the lace curtain, business. There is no longer the demand for the lace curtains which fifteen years ago adorned parlor and bedroom windows alike. Consequently the lace mills have rarely worked full time during the last six years. The gradual decline of output is illustrated by the figures of one of the large lace mills in Philadelphia (see fig. 22)[3]. It is claimed that some mills contain a large number of expensive machines that have never been used. Since both the employers and the lace weavers' union attempt to distribute what work there is among as many workers as possible rather than assist a portion of the employes to new trades, permanent part-time employment results. A second feature of the lace industry is its extreme irregularity. A new style in ladies' garments may make a sudden demand for a large amount of lace. The United States Government may send in once a year a large lumped order for mosquito netting for the Panama Canal Zone. With

[3] Figure facing p. 60.

plenty of machines and plenty of men already working part time or out on the streets waiting for a call, and a premium placed on prompt delivery, the firm rushes the order out in a short time—and the next month pay envelopes flatten out.

This condition of permanent unemployment among the lace workers is very generally testified to. The head of one of the largest lace mills in Philadelphia was asked whether, in his opinion, the lace and lace curtain workers had on the average worked three fifths of their time in the last five years. He said doubtfully, "I *think* so." The doubt in his words and in his voice implied that they certainly could not have averaged much above that. A lace weaver interviewed in Block "K" asserted that he had been working five hours a day for the last five years. This statement was independently confirmed by neighbors. The secretary of the National Lace Weavers' Association (one of the most intelligent and fair-minded labor men I have met) reports that, in his opinion, the average lace worker, in the last five years, has not made ten weeks altogether in which he worked full time.

Statistics of dues kept by the local Lace Weavers' Union show the large amount of time that is lost by the lace weavers. The union has a graduated system for the payment of dues. Prior to January, 1914, a member who made over $15 in any one week paid 75c. a week dues to the union. Members who made from $7 to $15 a week paid 50c. dues. Those who earned less than $7 a week were excused for the week. In 1914, the wage limits which form the basis for the different classes of dues was changed. Since that time those earning over $18 a week paid 75c. dues; from $10 to $18, 50c. dues; under $10, no dues. To be excused in whole or part from payment of dues, a member must produce his pay slip each week. The dues paid for each and every week are recorded in the roll book. The records thus kept appear to be accurate and reliable. These records, therefore, show clearly what members received less than $7 (or $10), from $7 to $15 (or from $10 to $18) and over $15 (or over $18) per week. Both employers and employes testify that "almost any kind of lace weaver can earn $20 a week if running full time, and they frequently make over $30 a week if running full." The vice-president of one of the largest lace mills in Philadelphia writes as follows regarding the full-time wages among lace weavers:

If all the weavers on the Nottingham lace curtain machines were divided into three general classes, low grade, medium and high grade, both from the standpoint of the ability of the weaver and the gauge of the machine on which they work, and bearing in mind that all Nottingham lace curtain machines run at the same speed whether fine or coarse, competently or incompetently managed, we believe the following would be a fair average earning:

Low grade Nottingham lace curtain weaver .....$18.00 per week
Medium grade Nottingham lace curtain weaver..... 21.00 per week
High grade Nottingham lace curtain weaver..... 24.00 per week

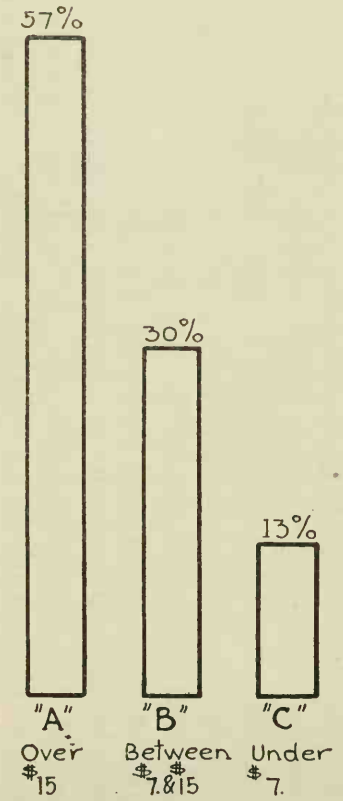
When it comes to a lace weaver, we cannot give the earnings with the same exactness, as a lace weaver may be skilled in one class of lace work and grossly incompetent in another. Most lace weavers have learned their trade in a locality making almost entirely one class of goods, and under the new condition of an American industry that must be resourceful to make any class of goods as styles may change we are encountering great difficulties. Aside from this fact, the weavers here are paid under a modified English card which puts a high rate on the bobbin fining goods for which England is preëminent and a very mixed card rate on the independent beam goods made almost entirely in France.

The best approximation that we can make we would report as follows:

Low grade lace weavers.....$20.00 per week
Medium grade lace weavers..... 25.00 per week
High grade lace weavers.....$30.00 to 35.00 per week

We would like it understood, however, that this is only an approximation, as on plain bobbin fining nets, which require less skill than perhaps any other class of goods, they sometimes get a weekly earning of more than $35.00 per week. This is one of the contradictions of the card under which we pay.

The union roll book statistics, therefore, indicate roughly the amount of part-time employment and unemployment in the lace business. These statistics were compiled from the union's roll book, covering between 300 and 400 members. These records show that from January 1, 1909, to January 1, 1914, 13 per cent of the cases of members reporting showed a weekly wage of less than $7; 30 per cent earned from $7 to $15 per week, and only 57 per cent earned over $15 per week. This result is shown graphically in fig. 2. In other words, in only 57 per cent of the cases reported in all of the working weeks was anything approaching full time made in that period. In 43 per cent of the cases, three-quarter time or less had been worked; and in 13 per cent of the cases, the members must have worked not over one-third time. Since January, 1914, when 75c. dues were required only when the weaver earned $18 or over, only 30 per cent of the cases have paid the highest dues. In other words,



Figures of the Phila. Lace Weaver's Union from Jan. 1st. 1909 to Jan. 1st. 1914. Chart shows for all the individual working weeks the percentage of cases in which was reported a weekly wage of

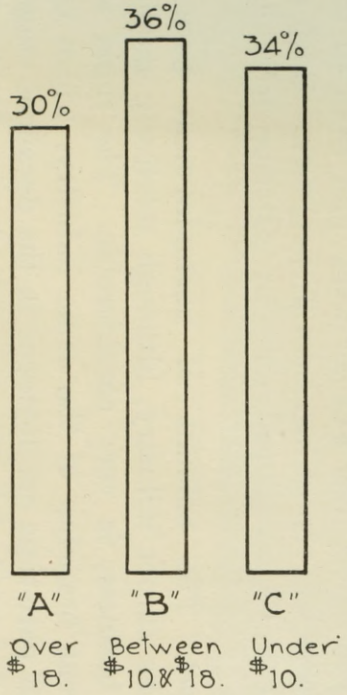
COLUMN "A" - over $15.00
COLUMN "B" - between $7.00 & $15.00
COLUMN "C" less than $7.00

Recalling that "almost any kind of a lace weaver can earn $20.00 a week if running full time" it becomes apparent how far the lace weavers as a whole fall short of attaining full time. Continuous full time operation during this period would have meant that COLUMN "A" would have included practically all of the cases save where sickness or voluntary absence of the worker reduced the wage scale. Since less than 3% of time ordinarily lost for these reasons, their influence in affecting the chart is negligible.

Stated more simply this chart roughly means this! —

(1) In 57% (COLUMN "A") of the individual working weeks 3/4 time or better may have been made.
(2) In 30% (COLUMN "B") of the individual working weeks, conservatively speaking 1/3 to 3/4 time was made
(3) In 13% (COLUMN "C") of the individual working weeks, third-time or less was made.

FIGURE 2



Same as Fig. 2., save for the years 1914 and to June 1915. (The wage classification is slightly different from Fig. 2).

Stated simply this chart tends to indicate

(1.) In 34% (COLUMN "C") of the individual working weeks reported for 1914-1915, something less than half time was made.

(2) In 36% (COLUMN "B") of the cases from half to nine-tenths time was made.

(3) In 30% (COLUMN "A") of the cases was anything approximating full time made.

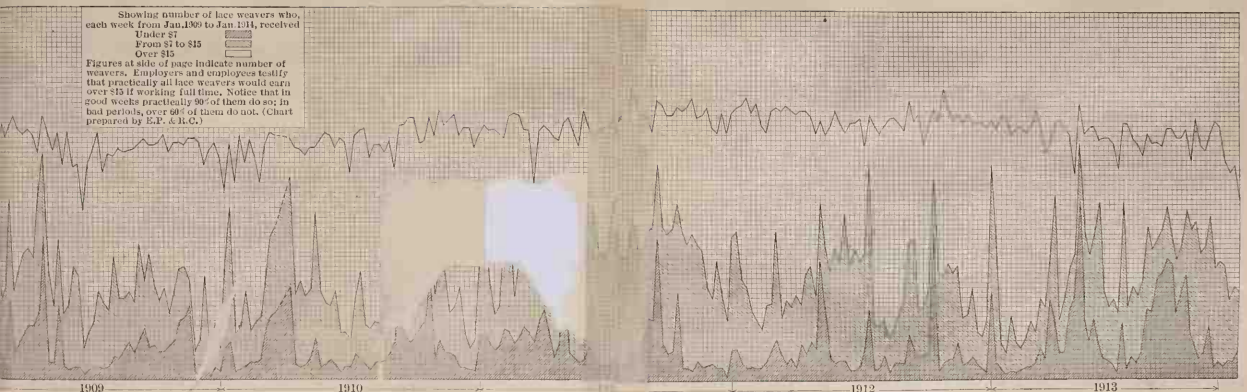
FIGURE 3

since January, 1914, anything like full time has been reported in approximately 30 per cent of the individual working weeks. Since January, 1914, wages of from $10 to $18 a week were reported in 36 per cent of the cases; and 34 per cent of the cases reported less than $10 a week. In other words, stating it conservatively, in 70 per cent of the cases of individual working weeks during 1914 and to July, 1915, the weavers must have worked not over nine-tenths time; and in one third of the cases of individual working weeks reported, the time worked may have been none and could not have been over half-time.

The union statistics show also that the low dues do not come from a few particular individuals, but come fairly evenly from all—indicating that difficulty which all have in securing work, and not low earning power of a few, is responsible.

These results are shown graphically in fig. 3. Figs. 4 and 5 show for each week in the last six years and one-half the number of members paying each different class of dues. Since the lace-weaving trade is completely unionized, these figures represent the whole trade. It should be remembered that these figures include weavers only and that there are a great many others (about 5,000 in all) employed in the lace industry in Philadelphia. These running charts show great irregularity in the size of the groups earning the different classes of wages. Frequently, for a month, 80 per cent of the cases will report over $15 per week. Shortly after, will follow a month in which only 40 to 50 per cent of the cases will report over $15 per week, and from 10 to 20 per cent of the cases will report less than $7 per week. Such extreme irregularity can be occasioned only by extreme irregularity in employment.

2. *Carpet.* The amount of unemployment permanently existing in the carpet industry, although relatively smaller than in the lace business, is very considerable. The rapid rise and fall of different branches of the same industry, which causes a long period of part-time employment in the decadent stages of an industry, is also marked in the carpet business. During the last 15 years, the development of cheap grass and other kind of rugs has led to the almost total extinction of the manufacture of "ingrain" carpet which was once the chief kind manufactured in Philadelphia. After a long period of part-time employment,


Showing number of lace weavers who, each week from Jan.1909 to Jan.1914, received
Under $7
From $7 to $15
Over $15
Figures at side of page indicate number of weavers. Employers and employees testify that practically all lace weavers would earn over $15 if working full time. Notice that in good weeks practically 90% of them do so; in bad periods, over 60% of them do not. (Chart prepared by B.F. & R.C.)
1909
1910
1912
1913

Fig

many of the firms who formerly manufactured "ingrain" carpet have either gone out of business, or replaced ingrain machinery with machinery to manufacture Wilton, Brussels, Axminster, or tapestry carpets and rugs. When rugs began to replace carpet in popular esteem, the Wilton and Brussels carpet manufacturing concerns grew busy, expanded and took much of the business away from the Axminster and tapestry carpet manufacturers. Recently the makers of Axminster and tapestry carpets have come to manufacture

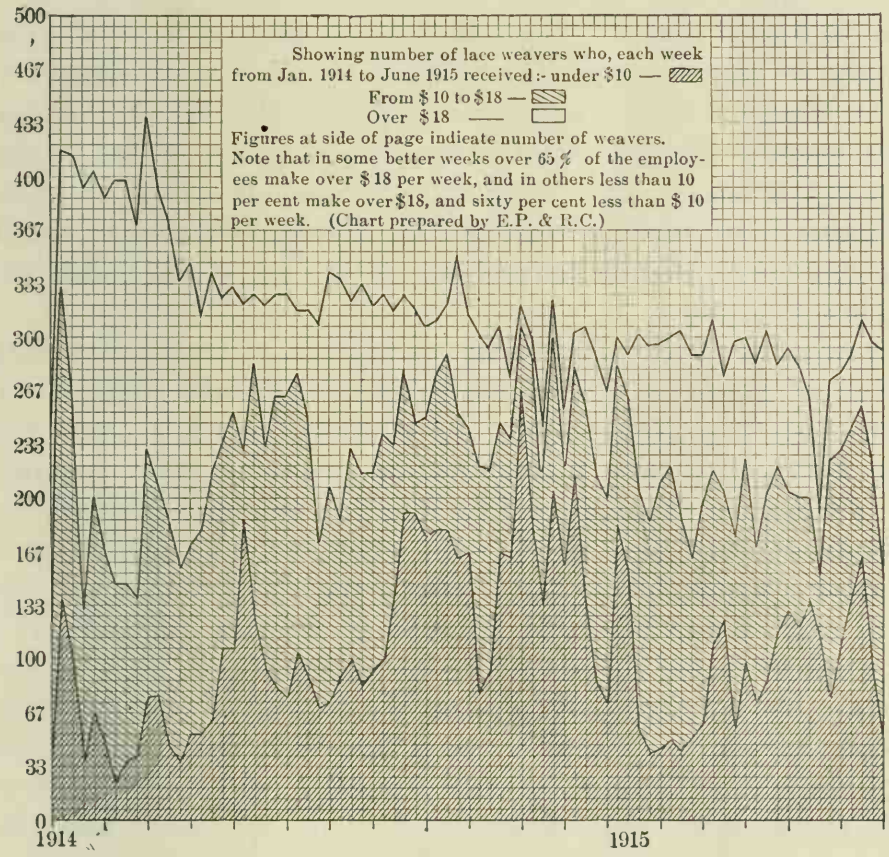

Showing number of lace weavers who, each week from Jan. 1914 to June 1915 received:- under $10 —
From $10 to $18 —
Over $18 —
Figures at side of page indicate number of weavers.
Note that in some better weeks over 65 % of the employees make over $18 per week, and in others less than 10 per cent make over $18, and sixty per cent less than $10 per week. (Chart prepared by E.P. & R.C.)
500
467
433
400
367
333
300
267
233
200
167
133
100
67
33
0
1914
1915

FIGURE 5

very satisfactory rugs. Since these rugs are cheaper than the Wilton and Brussels rugs, some of the trade has in recent years swung back to these firms.

The tendency to manufacture solely to order has served to increase the irregularity in production and employment. The manager of one of the largest Brussels and Wilton carpet concerns in Philadelphia says, "I can remember 25 or 30 years ago,

when we used to manufacture to stock in the off season. We would pile our warehouses full of stock; sometimes we had as much as $100,000 worth piled up. Then when the season opened, we would hire all the carts and boys we could lay hands on and haul the stuff away to the station. Now we hardly manufacture to stock at all." For two months in the spring and two months in the fall this firm manufactures chiefly for samples. Charts showing the wide seasonal variation in the number employed and in the average wage per week in each department of this firm are shown in figs. 6 and 7. Note that in off seasons and off years, not only is the number of employes considerably reduced but also the *average wage* per employe. The records kept by the union in this industry furnish little or no measurement of the amount of unemployment. The secretary of the Weavers' National Association (with headquarters in Philadelphia) estimates that the union members of the industry have lost 25 per cent of their time in the last five years.

In order to throw light upon the amount of time lost through a period of years in one representative Axminster firm, an intensive study was made among the piece workers in a large well-known Kensington firm manufacturing medium grade Axminster rugs. (Frequent reference will be made to the facts secured from the study of this firm which will, hereafter, be referred to as Axminster Carpet Mill "A.") The records of this firm were kept in such a way that the amount of working time spent by piece workers in the mill could be ascertained. In no year since 1910 have the employes actually on the payroll of this firm failed to spend at least 21 per cent of the entire year's working time outside of the mill. During the entire period, 1910 to 1915, 28 per cent of the time was lost by the employes of this mill. Since less than 2 per cent of this lost time was due to vacations, we may assume that at least 26 per cent of the working time was lost for reasons other than vacations. The time lost through sickness or voluntary absence of workers did not amount to over 3 per cent of the total working time. The relation of time lost to time made each year is shown graphically in fig. 8. Nor does this measure complete the amount of unemployment occasioned by this one mill, because the time lost by employes in the mill waiting for material or other reasons is not included, nor is the time lost by those who

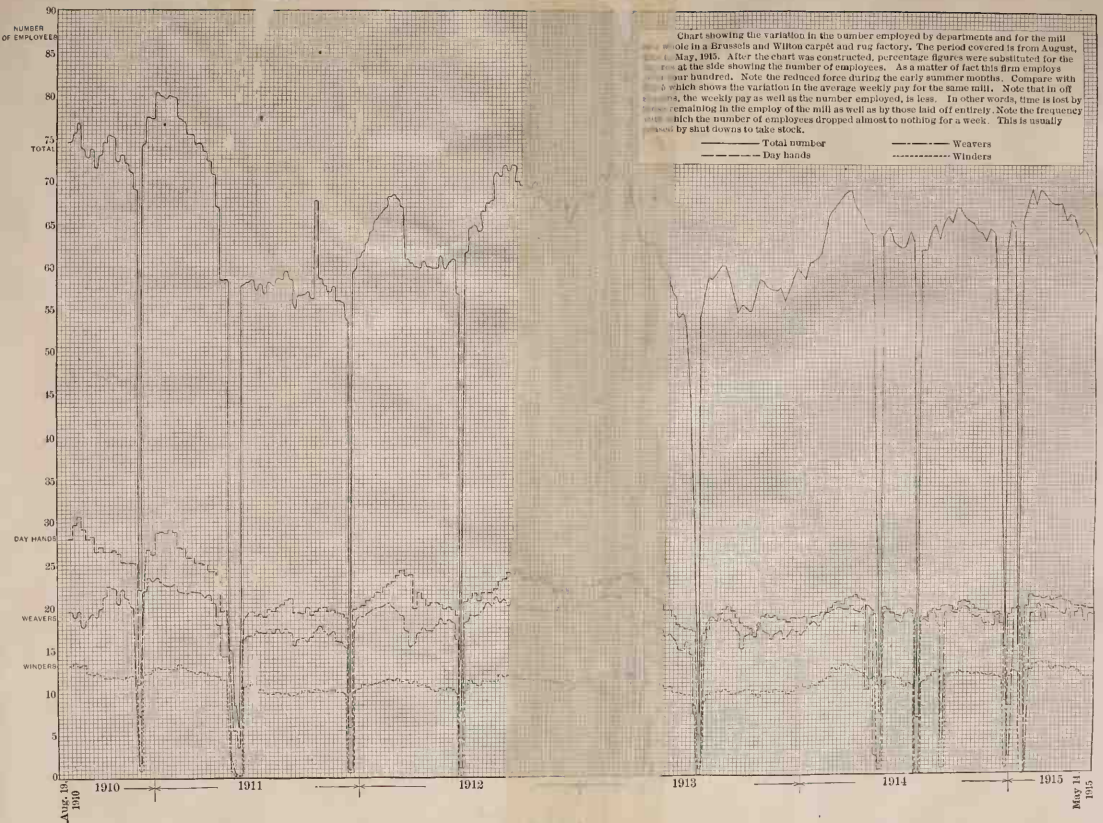

NUMBER OF EMPLOYEES
TOTAL
DAY HANDS
WEAVERS
WINDERS
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
AUG. 13 1910
1910
1911
1912
1913
1914
1915
MAY 11 1915
Chart showing the variation in the number employed by departments and for the mill ole in a Brussels and Wilton carpet and rug factory. The period covered is from August, May, 1915. After the chart was constructed, percentage figures were substituted for the re at the side showing the number of employes. As a matter of fact this firm employs our hundred. Note the reduced force during the early summer months. Compare with which shows the variation in the average weekly pay for the same mill. Note that in off s, the weekly pay as well as the number employed, is less. In other words, time is lost by remaining in the employ of the mill as well as by those laid off entirely. Note the frequency hich the number of employes dropped almost to nothing for a week. This is usually by shut downs to take stock.
Total number
Weavers
Day hands
Winders

FIGURE 6

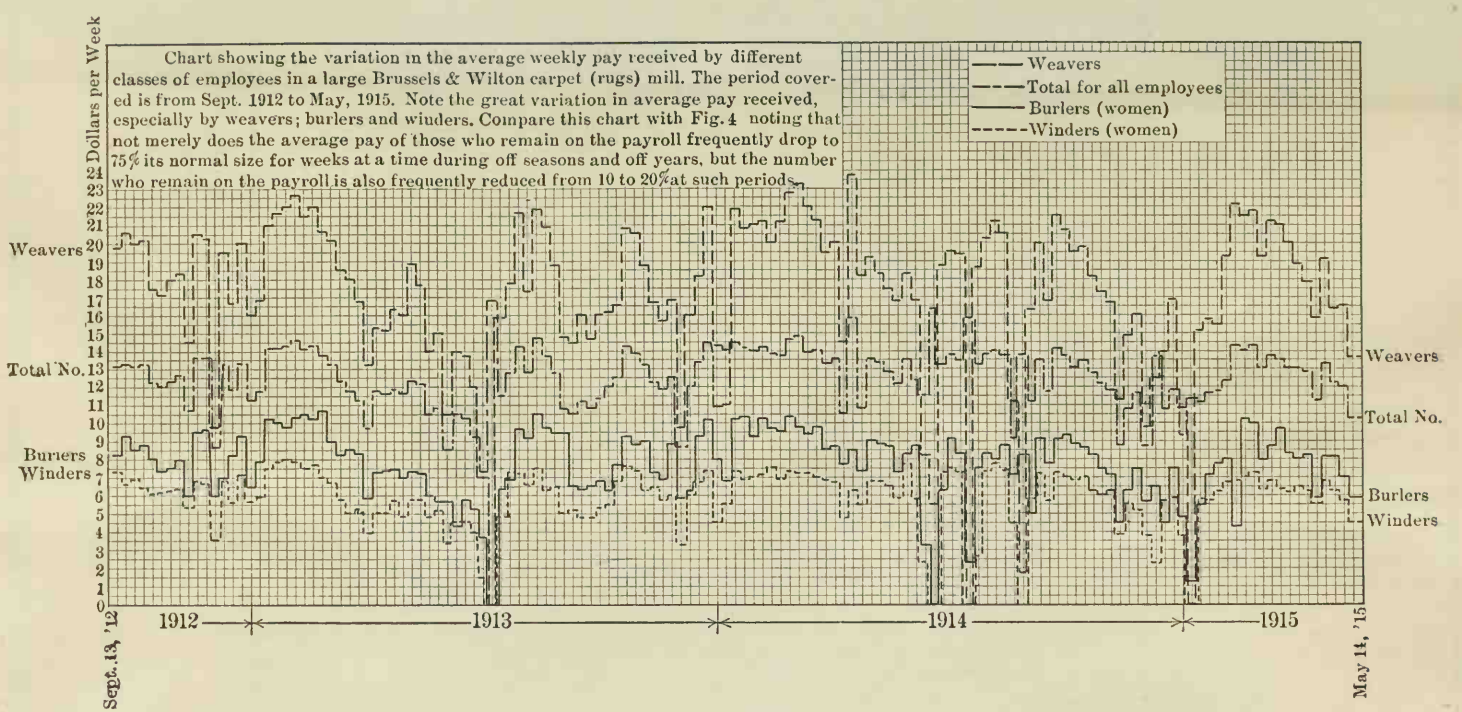


Chart showing the variation in the average weekly pay received by different classes of employees in a large Brussels & Wilton carpet (rugs) mill. The period covered is from Sept. 1912 to May, 1915. Note the great variation in average pay received, especially by weavers; burlers and winders. Compare this chart with Fig. 4 noting that not merely does the average pay of those who remain on the payroll frequently drop to 75% its normal size for weeks at a time during off seasons and off years, but the number who remain on the payroll is also frequently reduced from 10 to 20% at such periods.
Weavers
Total for all employees
Burlers (women)
Winders (women)
Dollars per Week
Weavers
Total No.
Burlers
Winders
1912
1913
1914
1915
Sept. 13, '12
May 14, '15

FIGURE 7

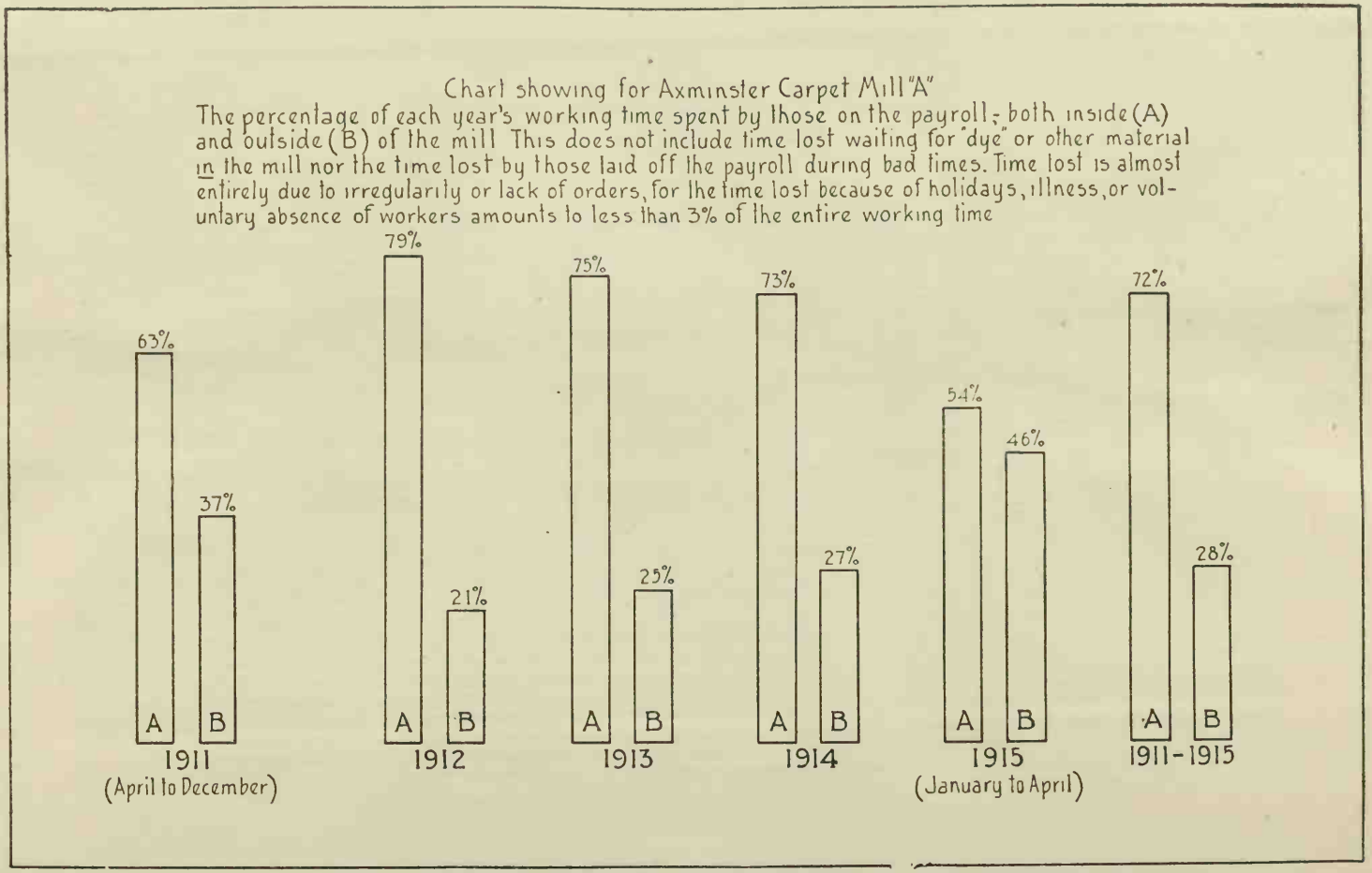


Chart showing for Axminster Carpet Mill "A"
The percentage of each year's working time spent by those on the payroll; both inside (A) and outside (B) of the mill This does not include time lost waiting for "dye" or other material in the mill nor the time lost by those laid off the payroll during bad times. Time lost is almost entirely due to irregularity or lack of orders, for the time lost because of holidays, illness, or voluntary absence of workers amounts to less than 3% of the entire working time
63%
37%
A
B
1911
(April to December)
79%
21%
A
B
1912
75%
25%
A
B
1913
73%
27%
A
B
1914
54%
46%
A
B
1915
(January to April)
72%
28%
A
B
1911-1915

FIGURE 8

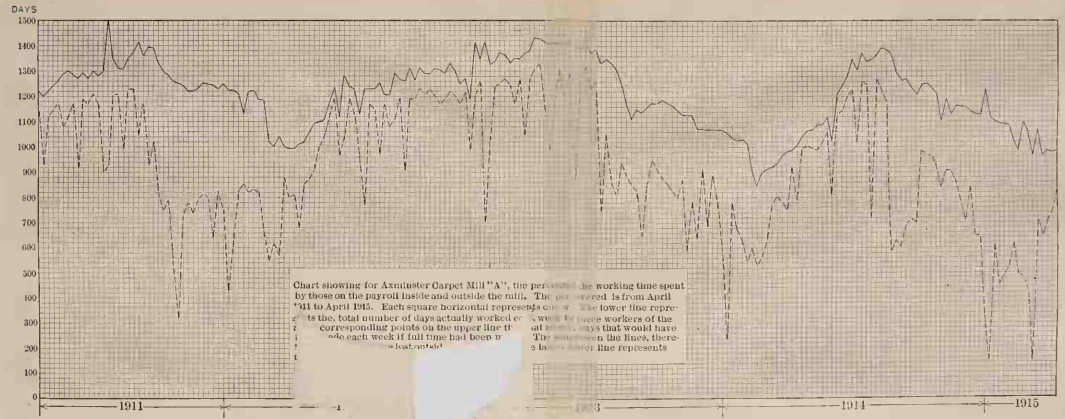


Chart showing for Axminster Carpet Mill "A", the per[illegible] the working time spent by those on the payroll inside and outside the mill. The [illegible]vered is from April [illegible]11 to April 1915. Each square horizontal represents one w[illegible] The lower line repre[illegible]ts the, total number of days actually worked e[illegible] week [illegible] piece workers of the [illegible] corresponding points on the upper line th[illegible] [illegible]ays that would have [illegible]de each week if full time had been [illegible] The [illegible]een the lines, there[illegible] [illegible] lost outsid[illegible] [illegible] lower line represents

FIGURE

are laid off whenever times begin to grow slack. For example, the force was reduced 20 per cent from July, 1914, to April, 1915. Moreover, the time lost through daily and hourly interruptions, which were not considered of sufficient size to warrant the workers being sent to their homes, does not enter into these figures. Charts showing in detail the time lost each week in this concern is shown in fig. 9. Where conditions vary as widely as they do in the textile

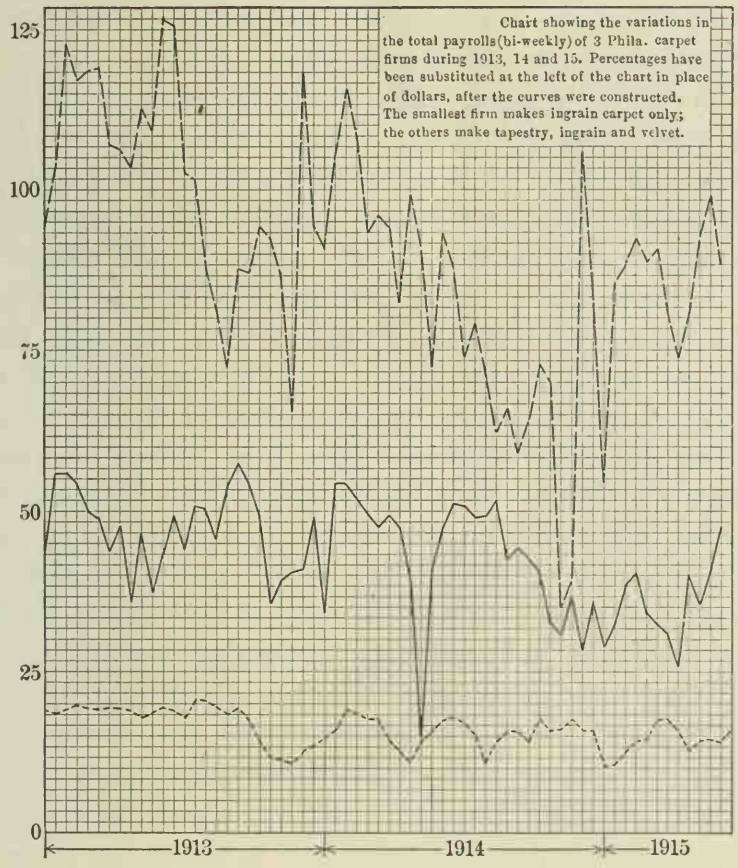


Chart showing the variations in the total payrolls (bi-weekly) of 3 Phila. carpet firms during 1913, 14 and 15. Percentages have been substituted at the left of the chart in place of dollars, after the curves were constructed. The smallest firm makes ingrain carpet only; the others make tapestry, ingrain and velvet.
125
100
75
50
25
0
1913
1914
1915

FIGURE 10

industry, it is impossible to say that the figures of any one mill are typical for all the textile industries. It should be remembered, however, that the conditions in this mill are among the most favorable for steady employment. The business is not highly seasonal and the goods are not so subject to the influences of extreme style, that the firm is forced to manufacture solely on orders. On the contrary, the articles are sufficiently well standardized to enable

the firm to make for stock up to the limit of its financial capacity, which is high. The experience and general ability of the management of this concern is above the average.

Figure 10 gives the figures showing the great irregularity in the payroll of a number of carpet firms from week to week for the last two years and one-half. Such constant irregularity as this in total payroll implies a considerable degree of irregularity in employment.

The number of wage-earners in the carpet industry in Philadelphia, and therefore the number affected by this irregularity in employment, is approximately 11,000.

3. *The Cloth Industry.* The cloth industry includes a wide variety of cloth products from cheap cotton and woolen print cloth through all kinds of worsted and woolen goods to women's and men's wear and fancy dress goods. The development of textile manufacturing in the South, with its advantages to the employer of cheap labor, has led the manufacture of cheap cotton cloth to be transferred to the South within the last 20 years. In the same period there has been a big falling off in the demand for cheap woolen cloth, which was once one of the big cloth items manufactured in Philadelphia. The high grade woolens and worsted are made chiefly in the big mills of New England. These considerations have led Philadelphians to become, to a considerable degree, manufacturers of "novelty" goods or fancy dress goods of various kinds. In a great part of this fancy dress goods business, production is exceedingly irregular because of the influence of style. The goods are not standardized and they depend on sudden veerings of style to create a new and sudden demand. When an order comes, rush delivery is demanded. When the order is filled, workers are idle. Many kinds of machines are required to manufacture the different varieties of dress goods. In many mills hands are trained to work on one kind of machine only. When a rush order comes it usually involves but one kind of weaving machines. The result is that workers on one set of machines will be working under high pressure, perhaps overtime; while workers on other machines in the same room are on the streets from lack of work. Two weeks later conditions may be reversed.

One small manufacturer of novelties reported that as a result of the above conditions he had not worked more than 50

per cent of his machines at any one time in the last three years. Some idea of the irregularity in employment in such a plant may be obtained from fig. 11, which shows the variation in the number employed and the variation in average pay per weaver at each two-weekly pay day since February 16, 1912.

The figures of another large well-known concern, manufac-

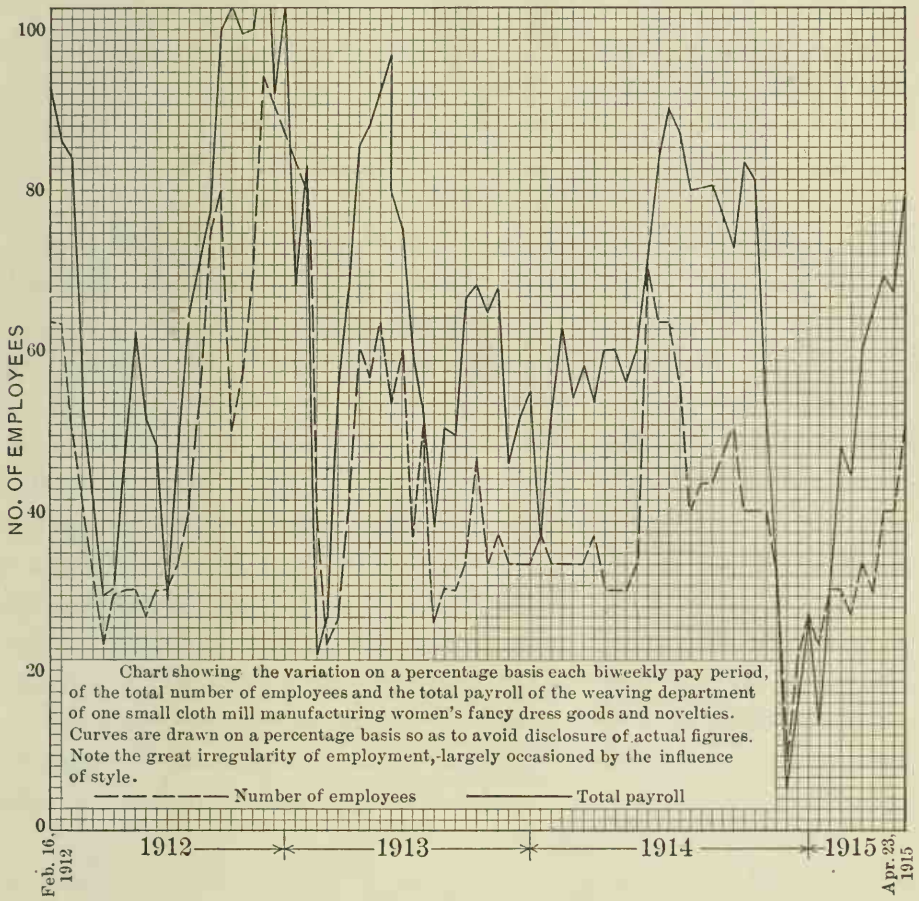

100
80
60
40
20
0
NO. OF EMPLOYEES
Chart showing the variation on a percentage basis each biweekly pay period, of the total number of employees and the total payroll of the weaving department of one small cloth mill manufacturing women's fancy dress goods and novelties. Curves are drawn on a percentage basis so as to avoid disclosure of actual figures. Note the great irregularity of employment,-largely occasioned by the influence of style.
Number of employees
Total payroll
1912
1913
1914
1915
Feb. 16, 1912
Apr. 23, 1915

FIGURE 11

turing women's high-grade fancy dress goods, indicated also the extreme irregularity of employment in this industry. Fig. 12 shows the wide variation in the number of looms running each month from January, 1910, to June, 1915. It does not follow that the looms classed as "working" were running steadily during the months indicated. Figures for the period 1910–1915 show that, each month, on the average, 36 per cent of the looms did not

operate at all; 64 per cent were running, but not necessarily continuously. This result is shown graphically in fig. 13.

4. *Hosiery.* Lost time is normally less typical of the hosiery industry than of the three branches of the textile industry mentioned above. Even in normal, as well as abnormal

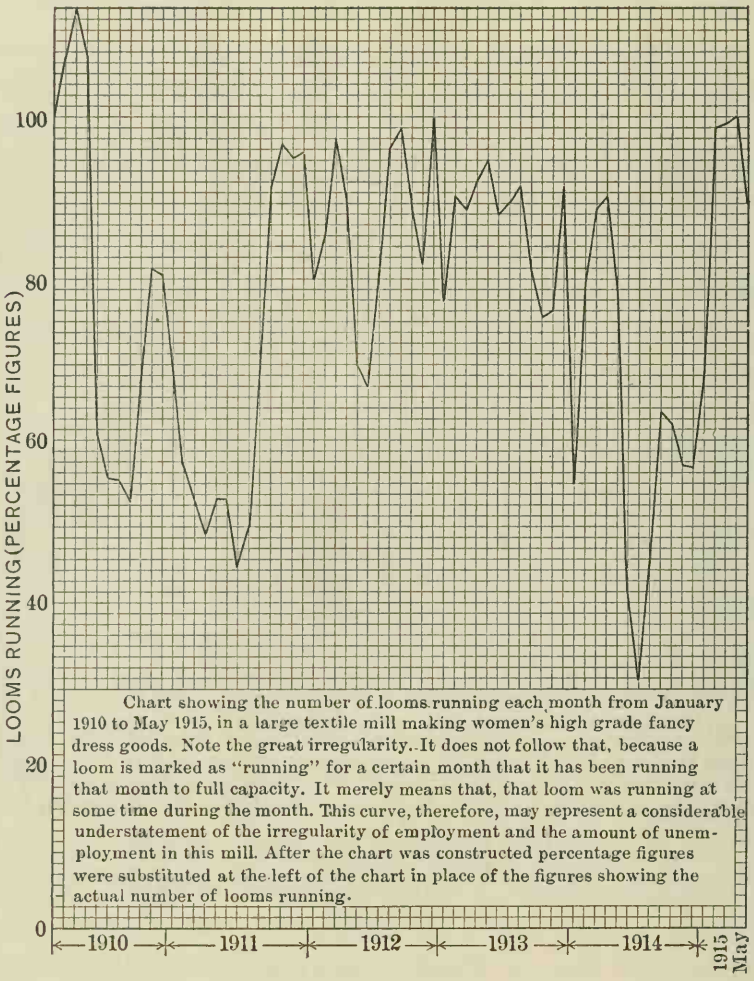


Chart showing the number of looms running each month from January 1910 to May 1915, in a large textile mill making women's high grade fancy dress goods. Note the great irregularity. It does not follow that, because a loom is marked as "running" for a certain month that it has been running that month to full capacity. It merely means that, that loom was running at some time during the month. This curve, therefore, may represent a considerable understatement of the irregularity of employment and the amount of unemployment in this mill. After the chart was constructed percentage figures were substituted at the left of the chart in place of the figures showing the actual number of looms running.

FIGURE 12

times, however, the business is characterized by considerable irregularity. This fact is brought out on the chart in fig. 25,[4] which shows the variations in total payrolls of seven of the leading hosiery firms in Philadelphia for the last two and a half years.

In this industry a manufacturer may keep his girls busy on

[4] Page 80.

stock in dull times if he desires, but his finishing department is thrown out, because goods can be packed only on order under present conditions (in most cases), because the manufacturer puts up goods under the jobbers' trade-marks. Conditions would be improved if all manufacturers agreed to manufacture under one trade-mark—his own.

This statement of conditions in the lace, carpet, cloth and hosiery manufactures touches but the high spots of chronic unemployment in the textile industry. In other branches of the industry—upholstery, for example—the conditions are just as characteristic.

B. The Clothing Industry

The clothing industry ranks with the textile industry in the seriousness of its unemployment situation. The men's and women's clothing manufacturers each employ approximately 15,000 persons in Philadelphia (mostly Hebrews), of whom the majority are women. The manufacture of women's clothing is the more irregular. Increase of unemployment here has been due to the same vagaries of style responsible for irregularity in the cloth business. Changes of styles have made it possible to manufacture only at certain seasons. The very rapid increase in the frequency of style-changes, that has characterized the last two years, has served to break up even the regularity of irregular seasons and substitute a business characterized by sudden spurts followed by unemployment—in an order so irregular that it is impossible to be predicted. The Women's Garment Manufacturers' Association reports that five years ago, if business conditions were normal, there would be two big seasons—a spring and a fall season. Of these two seasons, the fall season was much the larger. In both seasons, however, there was but one main standard style for each line of garments. In preparing for the fall season, samples were made up in April, and the salesmen went on the road with these samples in May. Work on the orders sent in by the salesmen was begun in the factories in late June or July. This season continued until Thanksgiving, with July and August as the busiest months. During December little was done in the factories, except to make up samples for the spring season. Salesmen went out "on the road" early in January. Orders began to come in at once; the

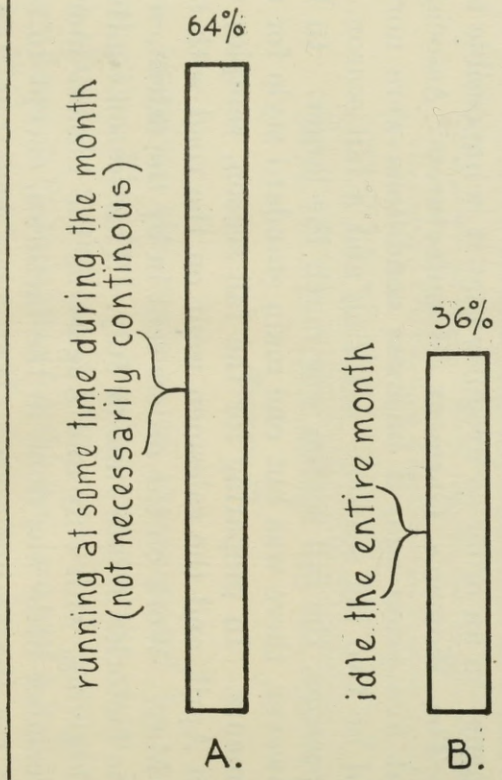


Chart showing for one of the largest dress goods manufacturing concerns in Philadelphia, the percentage of looms that, on the average, stand idle each month and the percentage which run at some time (not necessarily continous) during the month. This chart is based on the average for 65 months, – Jan. 1, 1910 to June 31, 1915.

FIGURE 13

factories started and ran nearly to capacity until Easter. From Easter until June or July little was done except the manufacture of samples. It is estimated by the secretary of the Women's Garment Manufacturers' Association that during this off season in the spring, as well as during the fall (from Thanksgiving to early January), the plants ran less than 20 per cent of capacity. The description of the seasonal variation of employment is confirmed by the union. Formerly many of the least skilled help were laid off altogether during the off seasons. The rest of the help spent their time in the factories, working when an occasional garment order came in or simply waiting. On September 10, 1914, an agreement was entered into by the Garment Manufacturers' Association and the union that provided that whatever work there is during the off season shall be divided equally among all the employes in the unionized branches of the industry. The outcome is that, during the off seasons, approximately the usual quota of employes is in the plant, but they spend four times as long waiting for a garment to appear as they do working on the garment after it is in their hands. Not many of the employes secure any other work in the off season. A few get employment in the department stores during the Christmas rush.

During the last year or eighteen months, changes in fashion have become much more frequent. No longer has the rule "one style, one season" held. During the fall of 1914 there were four distinct changes. These were noticeable in the great variety of coats and suits worn by women. Styles followed on the heels of each other so fast that it was impossible for women to keep up.[5]

This situation means complete disorganization of whatever regularity there has been in an already irregular business. Buyers buy sparingly of each style in anticipation of a new one. The season is, therefore, very short. When a new style appears, there is another sudden batch of rush orders to be pushed out under high pressure—and then, stagnation. Two long seasons have been chopped up into a number of short seasons. It is now impossible for the wage-earner to know what pay he will receive, or for the employer to know what business is in sight for him. Neither can

[5] It is asserted by those studying the unemployment situation in New York that it is impossible for the average employe in the women's clothing industry to work over 50 per cent of the time, because of the excessive irregularity.

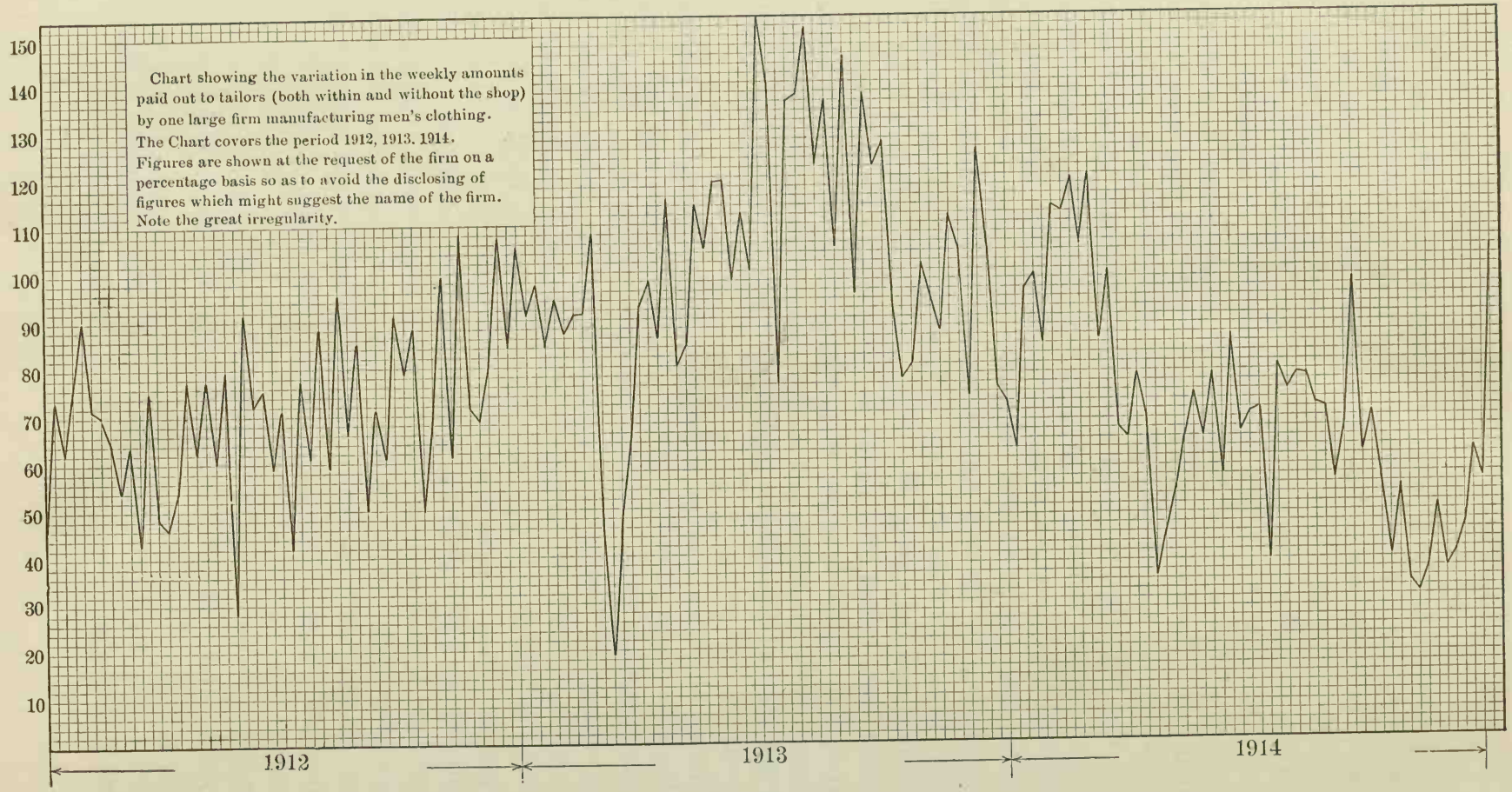


Chart showing the variation in the weekly amounts paid out to tailors (both within and without the shop) by one large firm manufacturing men's clothing. The Chart covers the period 1912, 1913, 1914. Figures are shown at the request of the firm on a percentage basis so as to avoid the disclosing of figures which might suggest the name of the firm. Note the great irregularity.
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
1912
1913
1914

FIGURE 14

plan ahead. To attempt this and trust to hitting the next fashion is so unsafe as to be a gambling proposition. The statement of a ladies' dress goods manufacturer (in which business the situation is analogous) will describe the situation. "One year I took a chance and made up goods ahead of the style. I happened to hit it right and made $85,000. I would hate to say what happens other times when I miss it." It is claimed by the secretary of the Women's Garment Manufacturers' Association that the introduction of idle periods into what was formerly a steady working period has added three or four weeks a year to the period of unemployment.

Both the union and the manufacturers' association report that an attempt was made during the last year to bring about an agreement among the manufacturers in Philadelphia, New York, Chicago and Cleveland, that they should decide on one style for a season and stand by it. This attempt to bring about stability in the business and to make employment more regular failed because of mutual suspicion among employers. Most employers claim that frequency of style changes is due to the two or three large manufacturers in New York, who set the style and change it often so as to increase sales of their own goods. Others assert that it can be charged to the large department stores who knock down a style shortly after it has been created, and set up another so that buyers will be stimulated to purchase over again, in order to "keep up with the style." The answer of each department store, of course, is that it is forced to follow the example of its competitors.

While the seasons in different branches of the women's garment industries do not coincide, all concerns lose a proportionately large percentage of the annual time. A manufacturer of ladies' shirt waists employing several hundred hands has the following to say regarding the irregularity of employment in that industry and the influence that extreme styles have on regularity of employment:

> We run almost to capacity from January to June. From June to January we run at practically 50 per cent capacity. We are especially slack from June to October. Conditions used to be such that the irregularity always characteristic of our business was a constant thing which we could predict in advance. Knowing when it occurred, we could sit up nights and plan against it, and figure out some way to reduce irregularity in production and employment. We could furnish employment during our dull seasons by manufacturing to stock. Shirt-

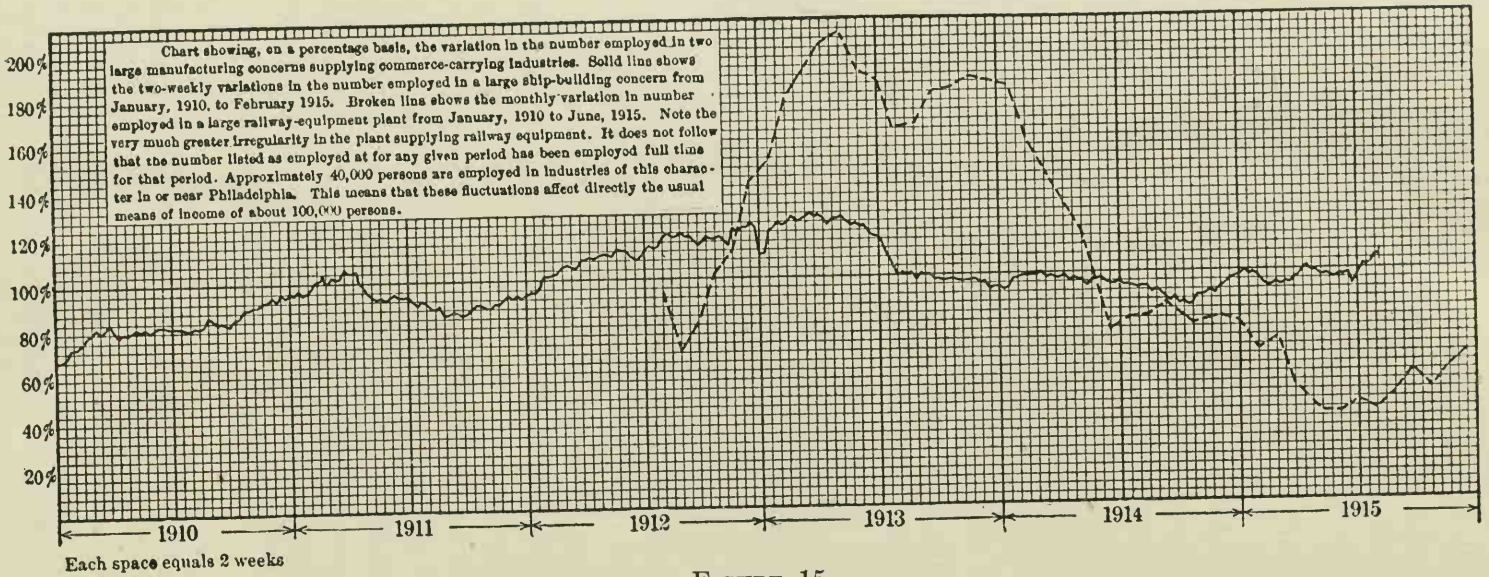


Chart showing, on a percentage basis, the variation in the number employed in two large manufacturing concerns supplying commerce-carrying industries. Solid line shows the two-weekly variations in the number employed in a large ship-building concern from January, 1910, to February 1915. Broken line shows the monthly variation in number employed in a large railway-equipment plant from January, 1910 to June, 1915. Note the very much greater irregularity in the plant supplying railway equipment. It does not follow that the number listed as employed at for any given period has been employed full time for that period. Approximately 40,000 persons are employed in industries of this character in or near Philadelphia. This means that these fluctuations affect directly the usual means of income of about 100,000 persons.
200%
180%
160%
140%
120%
100%
80%
60%
40%
20%
1910
1911
1912
1913
1914
1915
Each space equals 2 weeks

FIGURE 15

waists were fairly well standardized and there were no extreme styles. Orders would come in ten months before delivery was required, and the plant could manufacture fairly regularly since it could make up these orders whenever convenience demanded. Frequently we could make up stock in the off season till we would have 100,000 shirtwaists piled up which we would work off in the buying season. Frequently we would make from ten to twelve thousand waists without an order. We knew that the worst we would have to do would be to simply swap dollars. Nowadays, we rarely make over twenty-five garments without orders.

Although it is widely considered that men's clothing is so standardized that there can be little irregularity of production due to the variety of cloth and style, it is nevertheless true that the style-irregularity is only somewhat less than in women's clothing. The off seasons are less than half as long as the off seasons in the women's clothing business. How irregular the men's clothing business is, may be seen from fig. 14, which shows the weekly variation in the amount paid out by one large and representative men's clothing concern to tailors both within and without the factory. This represents the approximate variation in employment furnished.

One large manufacturer who makes a very high grade of clothing, a business which is subject to style changes, writes as follows:

Women's fashions play a more important part in dictating men's styles than ever before and, as a consequence, we have had more rapid changes in style than the average manufacturer does keep up with. These changes are not confined to the design of the garment alone, but the fabrics also, so that what applies to the clothing manufacturer might be said just as strongly of the fabric maker.

C. Industries Manufacturing Electric and Steam Railway Equipment and Ships

The third great industry that, in the long run, adds most to unemployment in the Philadelphia district is that group of industries which supply equipment to railroads and steamboat companies. The railroads and steamboat companies are notoriously irregular buyers. They buy in a lump. When conditions are favorable to them, they buy vigorously. When the reverse holds, these companies, especially the railroads, buy scarcely anything. Since there are in the neighborhood of 40,000 persons in these industries in and around Philadelphia, a severe curtailment of such purchases is sufficient to affect seriously, if not altogether

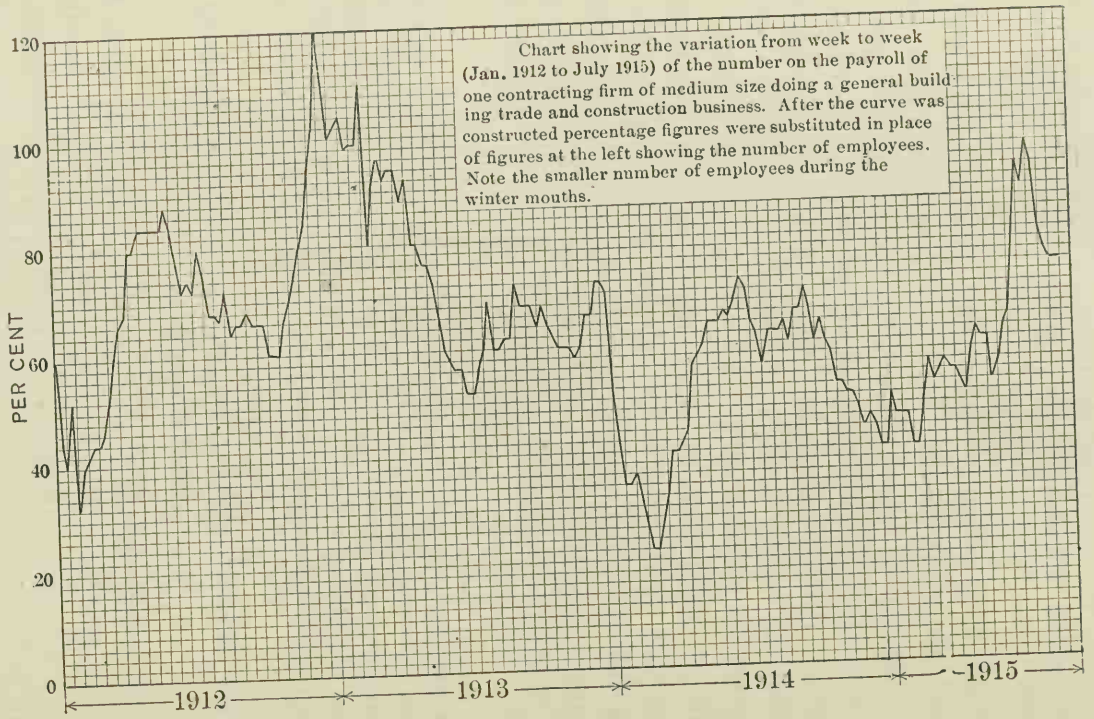


Chart showing the variation from week to week (Jan. 1912 to July 1915) of the number on the payroll of one contracting firm of medium size doing a general building trade and construction business. After the curve was constructed percentage figures were substituted in place of figures at the left showing the number of employees. Note the smaller number of employees during the winter mouths.
PER CENT
120
100
80
60
40
20
0
1912
1913
1914
1915

FIGURE 16

withdraw, the usual means of livelihood from a number of persons probably considerably in excess of 100,000. Cutting off the buying power of so many people is alone sufficient to create "hard times" in Philadelphia. This situation partly explains the statement of a prominent local manufacturer that Philadelphia is always either on the "top crest of prosperity or far down in the dumps." How irregular these industries are may be seen from a glance at fig. 15, which shows the variation in the number employed from month to month through a period of years in a large railway equipment plant and in a large shipbuilding concern.

D. The Building Trades

One of the few industries that is becoming less irregular than it used to be is the building industry. Formerly little was done from Thanksgiving until late in March. However, the use of cement is lengthening the open season for certain lines of building work. Cement, when heated, mixed with gypsum and protected by salt hay, is fairly safe from injury by freezing, even in the coldest weather. If general business conditions are good, the builders of factories and office buildings are coming more and more to show little regard for the weather by running straight through the winter (except for an occasional severe day)—witness the Ford Motor Company building at Broad Street and Lehigh Avenue. Cold weather is more to be reckoned with in the construction of houses and in street paving and sewer work. Not much work of this type is done from the middle of December to the last of February. The unemployment that results from this cause is less serious because the period is not long, is well known in advance, and can therefore be provided against. It is claimed that the influence of irregularity in work is offset, for the skilled mechanics, by a higher rate of wage. This, however, does not apply to the unskilled men, who are the hardest hit here as elsewhere. Some idea of the irregularity in the building trades may be secured by a reference to the fluctuations in employment of a representative construction company doing a general construction business, as shown in fig. 16.

E. The Longshoremen

It is a well-known fact that chronic unemployment exists among the longshoremen and dock workers in any large port;

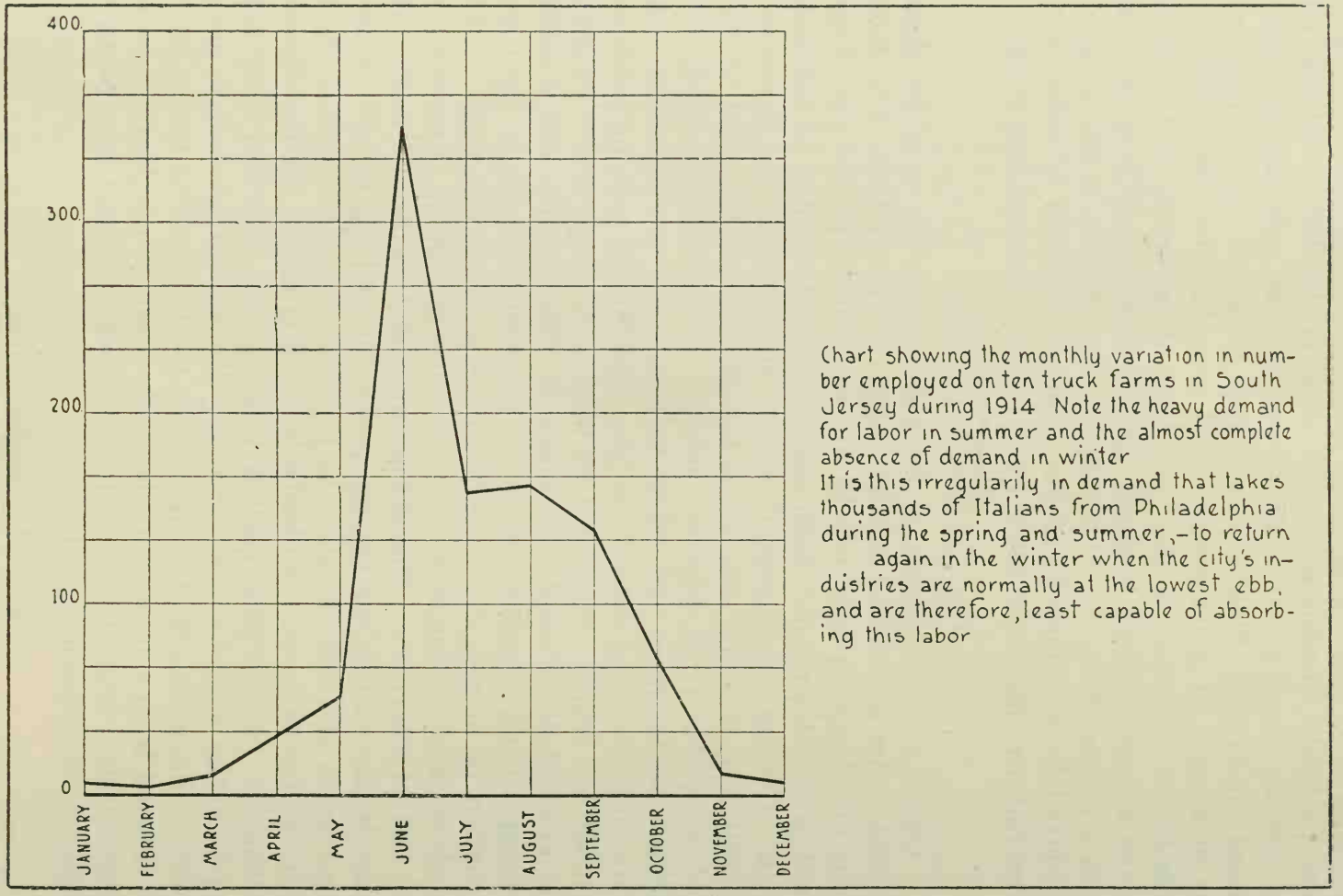


Chart showing the monthly variation in number employed on ten truck farms in South Jersey during 1914 Note the heavy demand for labor in summer and the almost complete absence of demand in winter
It is this irregularity in demand that takes thousands of Italians from Philadelphia during the spring and summer,-to return again in the winter when the city's industries are normally at the lowest ebb, and are therefore, least capable of absorbing this labor

FIGURE 17

and these conditions hold among the negroes and Poles and southeast-European dock workers of Philadelphia. In the absence of exact statistics, the statements of superintendents of labor of steamship companies and the heads of docking concerns throw the best light on unemployment among the dockmen. The head of one stevedore firm says,—"If every steamship company were employing today as many dock-hands and longshoremen as it employed on its busiest day last year, one-half of the dock labor would still be idle." Another says,—"I do not believe that the dock-hands average over two days a week." Although the wages per hour are relatively high,[6] the time lost is so great that the average weekly wage is low. In view of this lack of statistics for Philadelphia dockmen, the statement of the situation in New York may be taken as probably fairly typical of Philadelphia. Both employers and employes in New York testified before the Federal Industrial Relations Commission that the men earn on an average of from ten to twelve dollars per week. This irregularity tends to produce shiftlessness and dissipation in the workers.

F. Agricultural Labor

Agriculture is one of the most notoriously irregular industries in its demand for labor. This is particularly true on the farms that lie to the east and south of Philadelphia, in the sandy coastal plain portions of New Jersey, Delaware and Maryland. In these sections, the chief products raised are truck and vegetables. The cultivation and harvesting is done by hand to a much larger extent than is the cultivation and harvesting of most farm crops. As a result, South Jersey and Delaware have a very high demand for labor during the summer and fall. The extra demand Philadelphia and Baltimore are called on to supply. Every summer, whole families (chiefly Italians) migrate to the fields of South Jersey and Delaware in late May or early June, as soon as, or even before strawberries are ripe. Many of these families migrate from one section to another as the different crops in different sections ripen. Some remain till the end of the cranberry season late in October. These families then return to Philadelphia. After a bad winter, this exodus to the truck and berry field

[6] Thirty cents per hour, forty-five cents per hour for overtime up to midnight, and sixty cents for overtime after midnight and Sunday.

helps to relieve Philadelphia's unemployment problem. Stated the other way, however, although many of those returning in the fall to Philadelphia find employment in clothing factories, construction gangs, etc., it is apparent that these returning thousands are dumped on to the city's labor market just when winter is approaching and when the industries are least able to absorb them.

The extent of the irregularity of employment on the truck farms may be seen from a curve showing the variation in employment on truck farms in South Jersey during the year 1914. Letters of inquiry were sent to a large number of farmers selected at random in South Jersey. The curve in fig. 17, showing the monthly variation in employment on a number of truck farms in South Jersey during 1914, was constructed from the answers received from these inquiries.

Closely akin to the irregularity in the demand from South Jersey and Delaware for agricultural labor is the demand of the fruit and vegetable canneries for practically the identical kind of labor. The South Jersey, Delaware and Maryland section is one of the biggest centers in eastern United States for the canning of fruit and vegetables. The majority of these canneries, which employ thousands of hands at the height of the season, run from two to five months every year. A large part of their help is drawn from Philadelphia and Baltimore in the spring and return there in the fall.

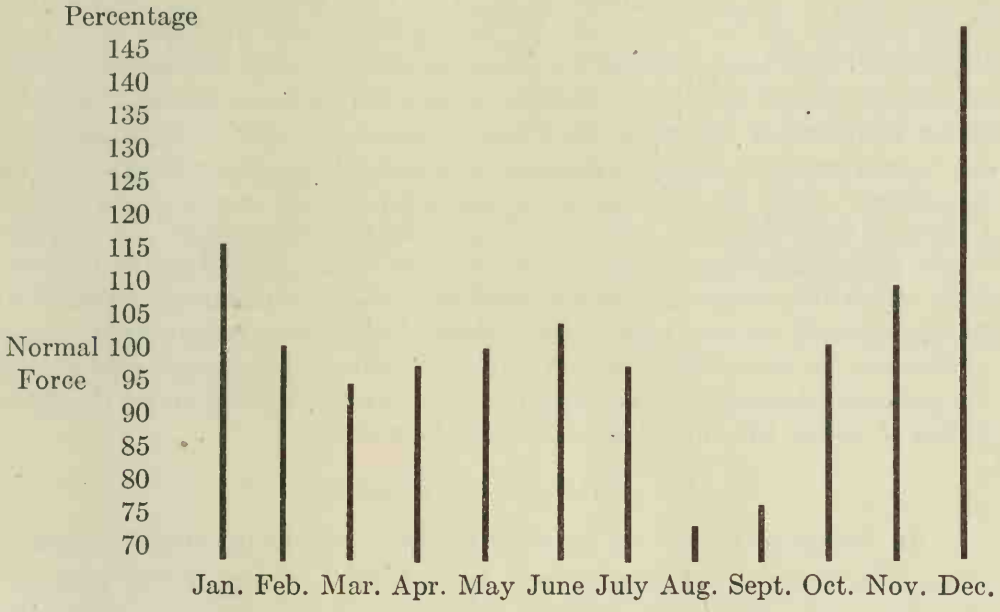
G. Department Stores

Employment in department stores is characterized by a considerable amount of seasonal irregularity. The high season occurs from Thanksgiving till Christmas. After the Christmas rush the number of employes usually declines until the last of February or March. During April and May the number is slightly increased in order to handle the sales of goods for the summer season. Employment during the summer season falls off, the low points being reached during July and August. The situation in the department stores is very well summarized in a study made by the Philadelphia Consumers' League, and published as a bulletin of the State Department of Labor and Industry:

REGULARITY OF EMPLOYMENT

The following chart, showing the variation from the normal in the number of employes in one large department store, at different seasons, shows a condition which is probably true of the four other large stores. The month of May, when this store considered its force about normal, has been taken as 100 per cent.

Percentage Fluctuation by Months in the Working Force of One Store



The month of December shows a 42 per cent increase in the normal force and August a 27 per cent decrease. This indicates plainly the number of temporary and intermittent department store workers at the command of any large store for busy seasons. Many girls work in the stores from September until Christmas eve or until January first, when a falling off of trade demands a cutting down of forces. Hundreds of employes are dismissed Christmas eve in every large store. A few of these workers will be reëngaged December 27 or 28 and kept through the January sales. A toy department that has normally 12 women, had 350 just before Christmas. About three hundred are dismissed December 24 and the others are gradually dropped during the next month until reduction sales and stock inventory are over. In March or April again extra workers will be taken on for two or three months.

Upon the examination of the records of 456 saleswomen in one store, for a period of 16 weeks from June to September, it was found that many saleswomen take some voluntary vacation beyond the paid week. The better paid women are out from one to nine weeks. The group considered had all been in the employ of the house at least one year and they averaged 7½ days' absence beyond their paid vacations in this summer season alone. Of those who were earning $8 and above, the largest proportion, or 55 per cent, were out one week and more beyond

the paid week, as against only 40 per cent of those earning under $8. In one department store regular saleswomen and six-day contingent sellers are given only three days' work a week in slack seasons.

Despite this great irregularity of employment that appears on the surface, department store unemployment is made less serious in that a number of those laid off at the Christmas season regularly return to other work, which they have temporarily left in a slack season. For example, many of the stores keep a list of addresses of people whom it regularly calls on during the rush seasons. The help needed in certain departments is drawn from the wholesale departments of the store to the toy, book, jewelry, etc., departments who need extra help. The second large source of help is by securing traveling men who usually are not very busy during December. The busy season of these persons comes while the stores are stocking up before the Christmas rush. A man who, for example, has been a traveling jewelry salesman, then becomes a jewelry salesman in the department store, etc. In the third place, department stores secure help at Christmas from the small tailoring shops, whose busy season just precedes that of the department stores. Moreover, many of those laid off at the end of a busy season are persons such as married women, school students, etc., who utilize this opportunity to earn some "pin" money. Although a considerable amount of time may be lost by those laid off by the stores before they are needed at their old positions, department store unemployment is made less serious by this dovetailing of trades which assures steadier employment.

H. Labor Union Statements

In order to throw as much light as possible on the amount of unemployment in Philadelphia industries, letters were sent by the Director of Public Works to each union affiliated with the Central Labor Union. One of the questions in the letter asked the amount of time lost by the average member. This query was designed to indicate the amount of normal unemployment there was in different trades. Unions were asked to answer this question only if they had records. The tabulated results of the limited number of answers received are as follows:

Union No.	Time annually lost by average number
1	About 8 months (only those temporarily employed considered)
2	4 months
3	10–12 days
4	2 months
5	3 days a week
6	half time
7	7 months
8	3 months
9	none
10	2 months
11	about 2 months

These answers represent but a small percentage of the labor unions in Philadelphia. As a rule, we may assume that those with the largest amount of unemployment were most ready to answer. Even allowing for this and for any mistakes in the estimates, the abundance of unemployment is apparent.

I. Miscellaneous Industries

The preceding is not intended as a complete statement of unemployment and irregularity of employment in Philadelphia industries. Only the largest of those in which unsteadiness of employment exists were selected. A long list of industries might be named, in which, for one reason or another, conditions are much the same. Surely enough has been said to prove the existence in Philadelphia (and probably any other industrial center) of a serious unemployment situation—firmly rooted, growing, detrimental to employer, worker and community, even in the best of industrial years.

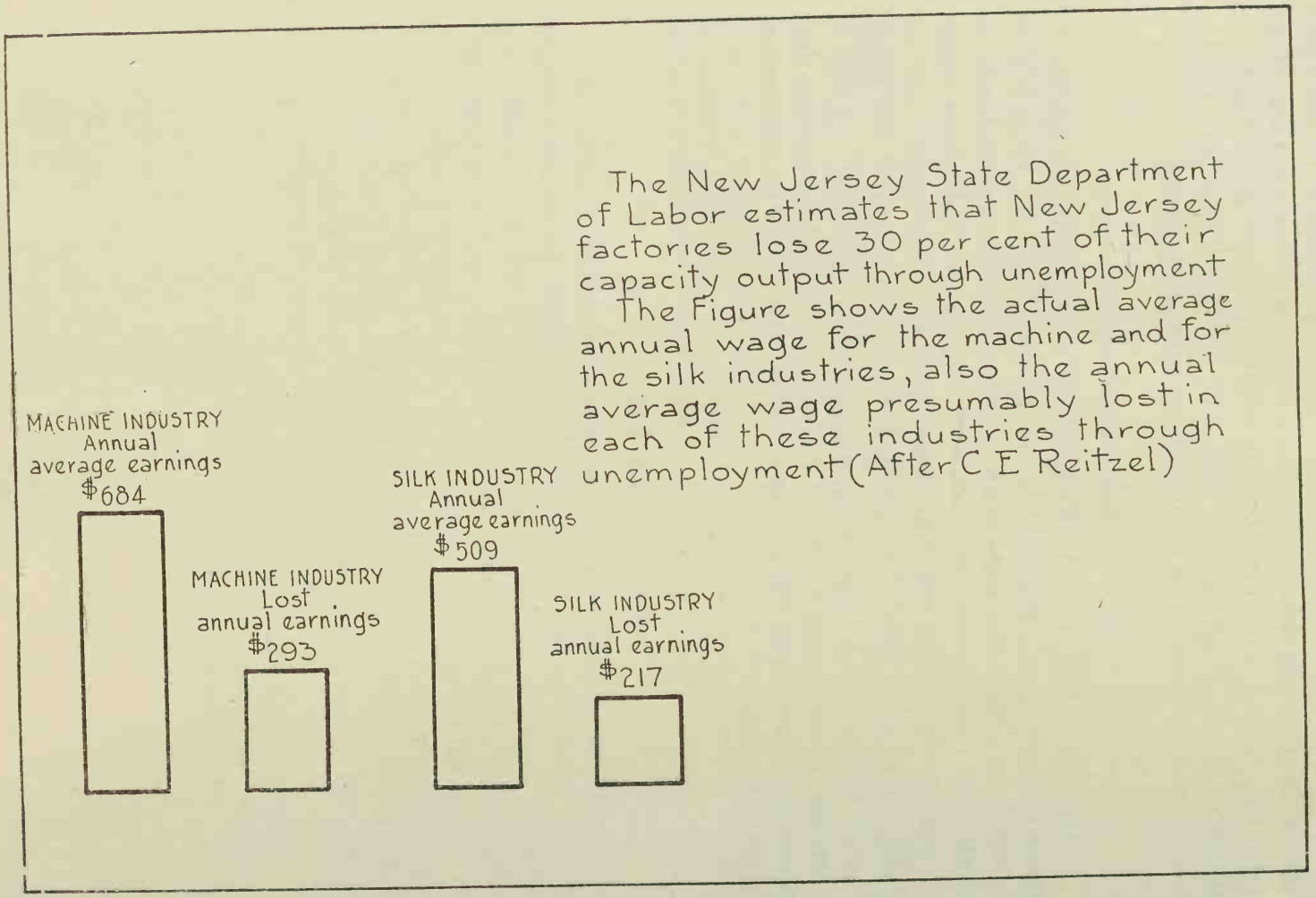

The New Jersey State Department of Labor estimates that New Jersey factories lose 30 per cent of their capacity output through unemployment
The Figure shows the actual average annual wage for the machine and for the silk industries, also the annual average wage presumably lost in each of these industries through unemployment (After C E Reitzel)
MACHINE INDUSTRY Annual average earnings $684
MACHINE INDUSTRY Lost annual earnings $293
SILK INDUSTRY Annual average earnings $509
SILK INDUSTRY Lost annual earnings $217

FIGURE 18

PART II

THE COST OF UNEMPLOYMENT

To the Employe

Little though we know of the facts of unemployment, we know even less of its social cost. We do not realize how deeply unemployment penetrates, and how seriously it threatens, our community welfare. Although unemployment affects every interest in the community, the burden falls most heavily on the working classes. When out of work the average member of the working class loses his chief means of support. It is, therefore, a matter of life and death to him.

The most immediate and vital effect of unemployment on the worker is a very serious reduction of the wage scale. Enough has been said to show how greatly unemployment reduces the pay received. In the absence of any general information for Philadelphia industries, an investigation made in New Jersey will best serve to indicate, in a general way, the extent to which the wage scale is depressed by unemployment. Figures collected by the New Jersey State Department of Labor from firms employing over 21,000 workers in the machine industry and from firms employing nearly 16,000 persons in the silk industry show that each of these industries worked during the normal industrial year of 1912 at approximately 70 per cent of total capacity. The actual average wage received during the year for the machine industry was $684; for the silk industry, $509. If full time had been made, it follows that an increase of over 40 per cent would have resulted. This would have meant an average annual wage for the machine industry of $977; for the silk industry of $726. This result is shown graphically in fig. 18.

It has been shown that in Axminster Carpet Mill "A", in the last four years, employes lost at least 27 per cent of the normal working time since that much of the time was spent outside of the mill. The actual average annual wage received by piece workers in this mill was $413 (based on statistics compiled for the entire force from April, 1911, to April, 1912, and from July, 1914, to

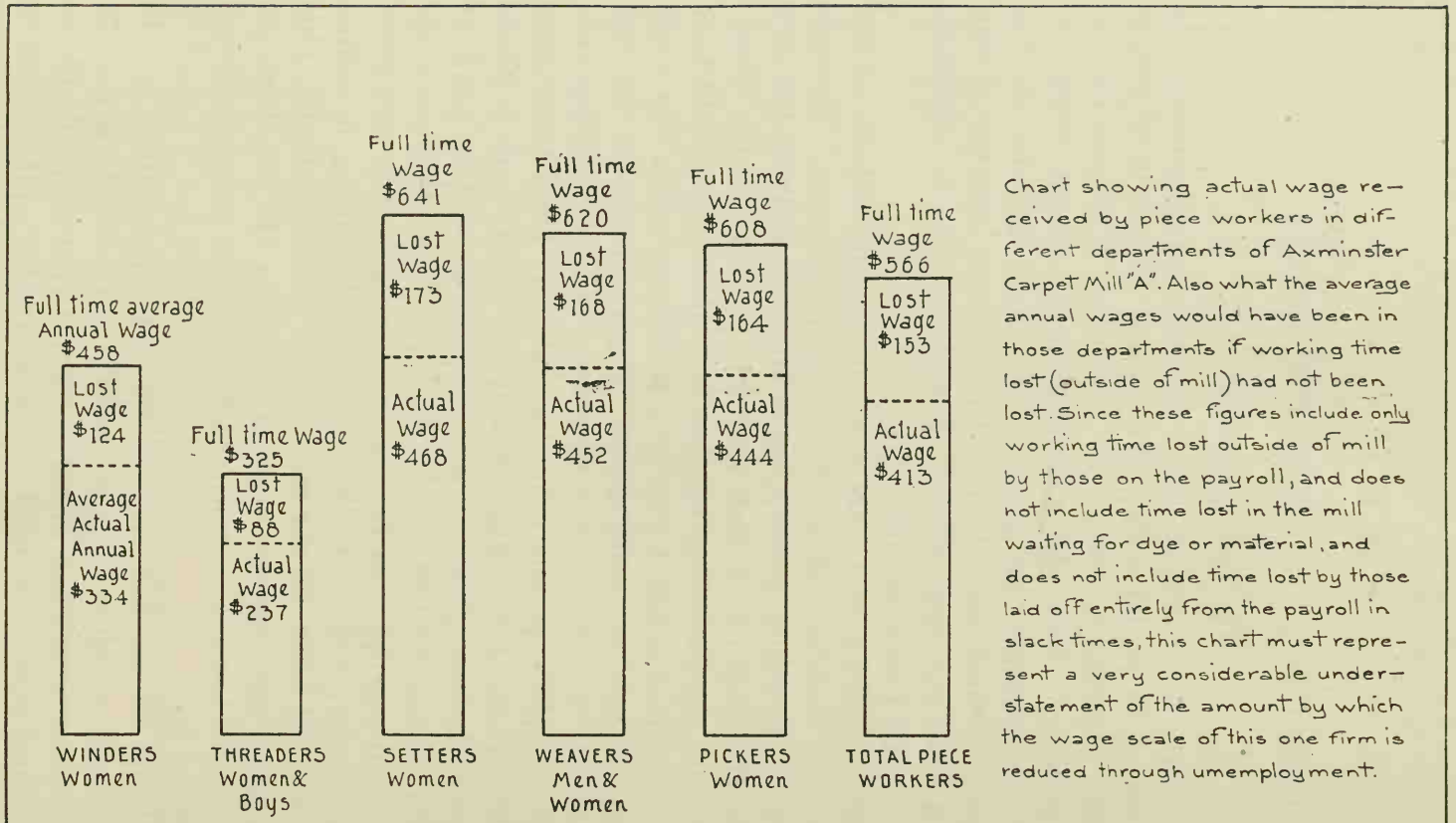


Chart showing actual wage received by piece workers in different departments of Axminster Carpet Mill "A". Also what the average annual wages would have been in those departments if working time lost (outside of mill) had not been lost. Since these figures include only working time lost outside of mill by those on the payroll, and does not include time lost in the mill waiting for dye or material, and does not include time lost by those laid off entirely from the payroll in slack times, this chart must represent a very considerable understatement of the amount by which the wage scale of this one firm is reduced through umemployment.

FIGURE 19

April, 1915). If this 27 per cent of time had not been lost, the average annual wage would have been $566. The average annual loss of wage per employe through unemployment was at least $153, and was probably much more, if time lost waiting in the mill, and time lost by those laid off, were included. Stated for individual departments, the actual average annual wage and the lost wage per employe would be as follows:

	Actual average annual wage	Average annual wage lost through lost time spent outside of mill
Winders	$334	$124
Threaders	237	88
Setters	468	173
Weavers	452	168
Pickers	444	164

These results are shown graphically in fig. 19.

In short, the worker loses the opportunity of earning 100 per cent of what his energies and abilities warrant. Permanent or chronic unemployment means a permanent loss of wage. In essence it means that the family of a man with a $1,000 or $1,200 earning ability cannot profit by or live according to the standard of such means, because the man is actually earning only from $500 to $1,000 a year. Not merely does unemployment seriously reduce the income of the worker; it makes his income decidedly irregular. Regular income is interrupted by periods of total or partial stoppage of income. In times characterized by such unusual industrial depression as of the past winter, the loss of income is complete on the part of thousands. To a large degree, the worker is entirely ignorant when such misfortune will befall him. Such a situation almost forces the worker to lead a hand-to-mouth existence. He hesitates to plan ahead, because he never knows whether he will be able to carry through his plans or not, for fear of an interruption of income. A premium is, therefore, placed on the lack of thrift. When the normal income returns after a famine period, it not unnaturally leads a family to spend extravagantly after the strain of pinching through a hard time, just as human nature always has, from the days we were savages, led us to indulge in an orgy of feasting after a long fasting. Unemployment and irregular employment are the arch enemies of thrift.

Perhaps the most serious industrial result of unemployment is its effect on the quality of the working people. It makes good workers bad. It turns workers who were capable and willing into men who are neither capable nor willing to hold a steady job if they could get one. As one man with whom I talked when he was out in front of a hosiery mill at the noon hour, said, "For six months before this month, we have been working from 8 to 3. When we came to go back to the old hours (7 to 5.30) it seemed at first as if we just couldn't make ourselves get up an hour earlier and work two hours later."

The utter inability of the workers to understand or to change the situation breeds a fatalistic lack of hope that soon manifests itself in a lack of ambition and effort. The secretary of the National Lace Weavers' Union says, "The lace industry has made more bums than any industry I know of. I have seen men go into the mills only to work an hour this morning or an hour this afternoon, so long, that they are incapable of sustained effort. They lose their personal 'punch' and often eventually lose their ability to discuss anything except how things are this week in this or that plant."

One of the usual ways by which such a depression leads to a debasing of the worker is by causing the skilled man to drift into an unskilled trade. When a man is out of work, he is very apt to "take anything" that offers, whether it is a job in which he can utilize his skill or not. The very common result is that he is never able to "come back" to his own trade. His ability in his particular trade is sacrificed and he drifts into the already tremendously overcrowded class of unskilled men. Not only the worker but the entire Philadelphia community as well, is the loser by this lowering of the skill of labor.

The injury to the worker by unemployment extends beyond his mere industrial efficiency, and dangerously affects the social standing, the family relations, the health, the intelligence and the public orderliness of the working classes of the community. A series of interviews with Kensington textile workers (chiefly Anglo-Saxons) is one steady story of used up savings, of increased debts, and of "half time" for four, six or nine months during the past winter. Even the few whose greater savings or "steadier time" would normally have led them to avoid the "pinch" of the past winter, have felt obliged to lend to the less fortunate to an extent

which, in many cases, has meant a severe drain on their own resources.

The lowered income during such a winter as the past (1914–15) very frequently means the curtailment of the necessities of food, fuel and clothing, to the point where the health is seriously impaired. It is almost impossible to measure this injury. Mr. R. R. P. Bradford, who is in charge of the "Lighthouse" and was quoted previously (page 6), said during the spring of 1915, "I should not be at all surprised if, as a result of the lowering of physical vitality among the Kensington workers, because of insufficient nourishment and protection, there should come about an epidemic of disease that will cost us dear. Whether it does or does not happen, we have a permanent injury as a result of this year's unemployment in the lessened vitality of the people."

Every severe depression is a great destroyer of family life. Almost every family with whom I conversed knew of two or three families that were forced to "break up" because of the unemployment during the past winter. One of the usual results of unemployment is a considerable increase in the number of thefts, burglaries and suicides. The figures of Table I show how these crimes have increased in Philadelphia during the winter of 1914–15, when unemployment was serious. Note also the increase of suicides during the winter of 1907–08—the year of the last severe depression.

TABLE I—EFFECT OF UNEMPLOYMENT ON SUICIDES AND CRIME

Number of crimes committed during three winter months of

	1906–7	1907–8	1908–9	1909–10	1910–11	1911–12	1912–13	1913–14	1914–15
Suicides	43	60	50	61	61	48	62	65	74
Larcenies	—	—	—	—	—	—	—	1,068	1,227
Burglaries....	—	—	—	—	—	—	—	32	44

While other causes may have contributed to this result, it seems obvious that severe unemployment must have been an important factor in the large increase for the present winter and for the winter of 1907–08.

The superintendent of truancy reports a much larger number

of students remaining away from school on account of the lack of fit clothes than in any recent winter. Only a teacher can appreciate the effect of irregular attendance on the progress of students in a class room.

Typical individual cases convey more clearly the situation in Kensington during the past winter than statistics. A few of these are, therefore, given.

Two English brothers, who have been in this country three and seven years respectively, are married and live in the same house. Both are cloth weavers and have worked at the same mill since their coming to America. The story of Kensington is summed up in the statement of the elder:

> During the last five years I have not worked full time more than half the time. At our mill we usually work five or six months steady, and then part time the rest of the year. In the entire seven years I have been here, eighteen months was the longest steady run we ever had. This winter business has been unusually bad. We have worked half time ever since Christmas (the date of the interview was in July).
>
> If we had had any children like the rest, we'd be up against it like the rest of them. Anybody with children is certainly poor. It isn't because we don't want children, but things are so that if you have two or three children, it takes all you are able to make in good times to supply the necessaries; then when bad times come, you are up against it. If next winter is like the last, a lot of the people we know will have to live on borrowed money, or go under. I have loaned $25 in the last nine months. My brother loaned $33 of which he has had $16 returned. You can't get credit here in a bad time like you can at home. Things are more irregular than they are at home. If we had any children to support, we would go back at once.

The native intelligence and honesty of this family were evidently of high calibre. The fact that they have worked three and seven years respectively at one mill is evidence of their industry.

Frank Ball, a day hand in the Axminster Carpet Mill "A", is described by his foreman as being steady and capable and industrious. Ball says:

> I have a wife and three children—12, 9 and 6 years old. Prior to last fall, I had $300 saved up. I get $2 a day, but since June, 1914 (this interview was in June, 1915), I have averaged less than $8 per week. My rent costs me $13. My father, who lives with me, has been sick, and this, combined with bad times, has used up our savings till we are now $65 in debt. I owe a bill at the clothing store, and I still owe for one of the five tons of coal I bought last year at this time. Now it's time to buy some more.

I don't know what I'd done if I hadn't had a more economical wife than most men. She makes over her old clothes so that they look like new, and when she can no longer fix them for herself, she makes them into clothes for the children. They look neat, too. My wife hasn't had a new dress since 1912.

During this winter, I tried not to let a dollar get away from me if I could help it, and took odd jobs here and there whenever I could get it on the days there was no work at the mill. Once we were shut down for five days on account of the death of a member of the firm. I heard of a job at King of Prussia (a village 17 miles out in Chester County) and went out and got a job there on a farm. I painted some steps, and did other odd jobs about the place. Even at that we could hardly get along.

A lot of families I know of broke up; one right across the street sold their furniture and separated to live with each other's folks. It will take a lot of people two or three years to get over this winter because a good many of them had to borrow money on their furniture. When the bills came due they were unable to make payments, and they lost their furniture.

What famine and black plague were to the middle ages, so is unemployment to the modern industrial world.

Cost of Unemployment to the Employer

Unemployment involves a far-reaching economic loss to employers, even though it does not so immediately affect their welfare as it does that of workers. However, it gravely endangers the welfare of any industrial community. It is a constant menace to an industrial center in its competition for trade with other centers.

Corresponding to the reduced wages of the employe is the reduced output of employers. In the absence of any comprehensive statistics bearing on our loss of output through unemployment, the statistics gathered by the New Jersey State Department of Labor and Statistics show a situation which may be taken as fairly typical of Philadelphia. Figures collected by the State Department from 2,556 firms show the actual output for the year 1912. They also show the output for those plants if "all the existing facilities were brought into use." These latter figures are estimated by the firms themselves. They show that for the normal industrial year of 1912, these plants were running only to 74 per cent of their capacity. Stated in terms of lost output it meant a loss of $363,000,000. Shown graphically the situation may be stated as in fig. 20.

The complete loss to employers is not to be stated solely in

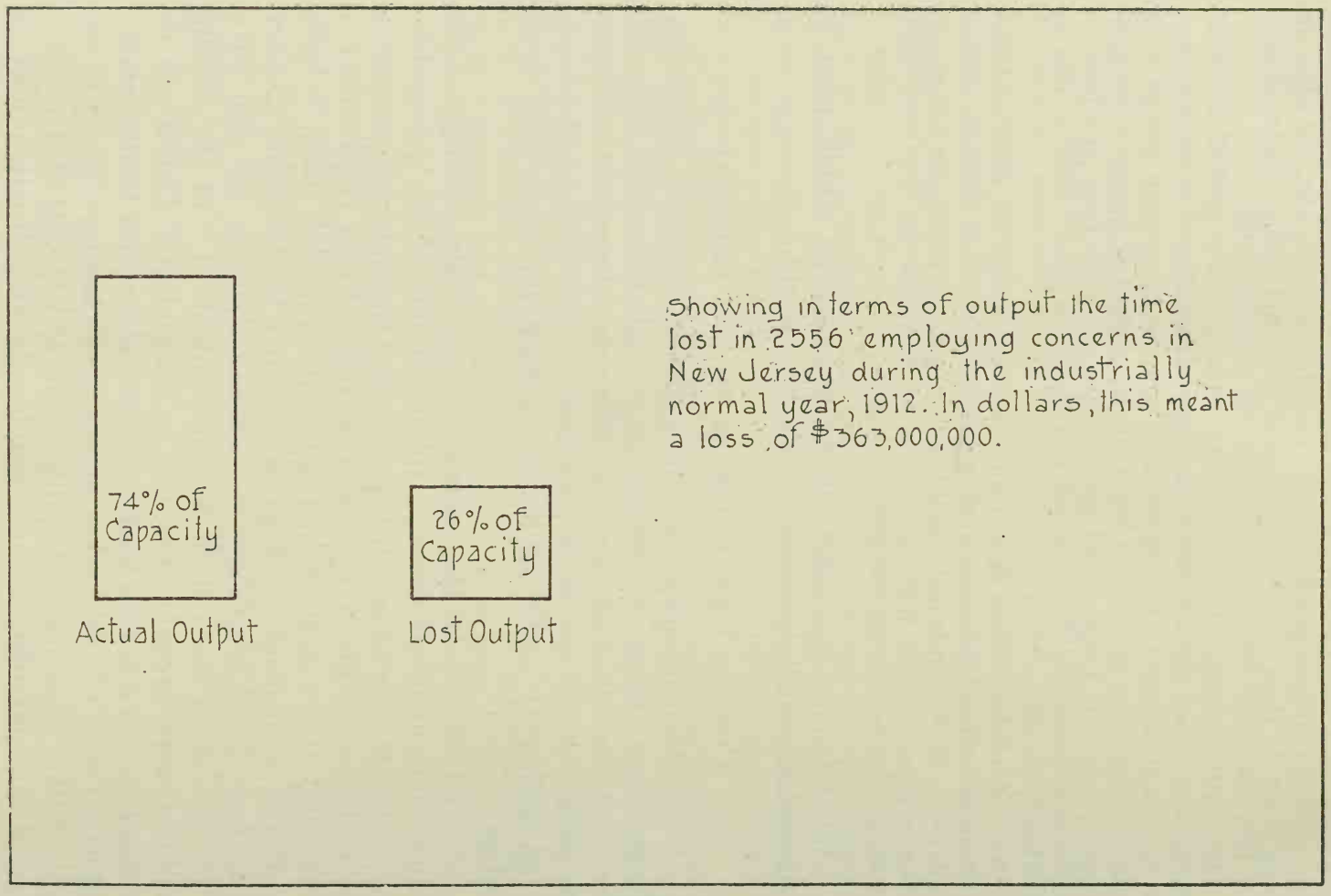

74% of Capacity
Actual Output
26% of Capacity
Lost Output
Showing in terms of output the time lost in 2556 employing concerns in New Jersey during the industrially normal year, 1912. In dollars, this meant a loss of $363,000,000.

FIGURE 20

terms so simple and obvious as in lost output. Perhaps deserving of higher rank than the loss of output is the loss experienced by employers in demoralization of organization. In answer to a question sent by letter to the managers of six representative mills in Kensington, five answered that they regarded unemployment or slack time as the chief causes of the rapid shift of employes from shop to shop. As one employer puts it, "We found that, while our men could make $3 or $4 a day when they worked, they rarely did because of the time that was lost through slack orders, waiting for changes in the dyes, etc. As a result, they were dissatisfied and we couldn't hold our best men." Another firm states the proposition conversely by saying, "We can keep our help and, incidentally, get the best help of our class, not because we pay a higher rate of wages—for as a matter of fact our rate is somewhat lower,—but because we guarantee our help steady employment and our twenty-five years' reputation bears out our claim."

An electric company (outside of Philadelphia) has the following to say regarding the demoralization of the working force through unemployment:

> It is realized by most manufacturers that not only is unrest and dissatisfaction produced among the working force by irregularities in production, but that there is a direct monetary loss of a considerable amount. This is especially true in industries which are conducted very largely by so-called unskilled labor which have to be taught how to perform the work on which they are employed as distinguished from work which is done by recognized trades. To illustrate, in a locomotive or general machine shop when work increases, more machinists are employed. These men, being trained artisans, are familiar with the work which they are employed to do and are immediately productive. In work similar to our own, unless we are fortunate enough to recover all of our old employes, which is never the case, a bulge in production requires the hiring of large numbers of unskilled men and women who have to be taught the various classes of work which are peculiar to our business. This training and development in the different departments requires all the way from a couple of weeks to six months.
>
> Where industries operate under this latter condition, the cost of securing new and untrained employes after a depression may amount to as much as from $25 to $40 per employe, this cost covering the cost of hiring, the cost of training, the work spoiled and the tools damaged during the process. It is aggravated by the fact that all the newcomers do not stick, so that to get one proficient employe in the end you have perhaps started with three, four or five and taken them part way through the training process.

Further reference will be made later to this flow of labor through shops. It is sufficient to say here that this rapid shifting

of labor means a generally lower development of skill on the part of workers and, in the second place, the almost constant presence in the shop of an unusually large number of greenhorns.

The loss of efficiency does not stop simply with the lost skill of those who leave. The manager of one of the largest toolmaking concerns around Philadelphia, says, "After a period of unemployment, it takes the employer three weeks to get his force and plant up to the point where it can turn out orders with normal efficiency. During the slack times it has run down at the heels." The foreman of Axminster Mill "A" says, "Even if the same weaver comes back to the same loom, after a long period of lost time, it takes three weeks before the loom will run again as well as it did before we shut down."

More insidious than these losses to the employer is the loss during periods of unemployment through the degeneration of the workers in spirit, energy and ambition. As one employer writes: "Working men or working women who, through no fault of their own, are deprived successively time on time of the opportunities to realize their earning capacities, inevitably suffer impairment of courage, self-respect and even moral fibre, the loss of which falls first upon the community, but eventually upon industry, in the depreciation in quality and spirit of the labor supply." Philadelphia has been known as the best labor market in the world. Unemployment does not tend to keep her so.

Finally, unemployment, if widespread, knocks the props out from under a market that may already be sagging, because it tends to diminish the buying power of the community, so that industries which might normally be ready to start again, are discouraged from beginning.

One progressive Philadelphia employer sums up the injury by unemployment in their forging and finishing shop as follows:

> When our factory begins to lose time and works on reduced hours, the first thing we notice is breaking up the personnel of our working force. Our best mechanics, who are capable men, begin looking around for other positions. As these men are in the minority, their loss is keenly felt, as quite often one man will be the backbone of a gang of three or four, and his loss is very severe both in efficiency of production and in quality of work. High grade men have less trouble in obtaining other positions under normal conditions than the inferior grade of workmen, and unless a great deal of care is exercised during times of depression, a factory is liable to be left with their less efficient men on hand.

With the loss of any of our men it seems that we must break in new men for the work. If we are running our regular output on a piece work system, as we do here, it simply means that the new men, not having the knowledge sufficient for efficiency, cannot be put on a piece work basis and it is necessary to start him on time work, raising the cost per unit from 5 to 10 per cent.

New men, likewise, turn out more bad work than is usual, and this work is either an absolute loss or must be worked over again at an additional expense. This item, while not large, is simply an added burden to our cost.

In our plant where material cuts such a figure we likewise find that replacing regular men with new men means that they waste material. The difference between the waste of a bar used for a given product and the actual finished product is termed scrap in our cost keeping, and we have figures showing that these men produce 10 per cent more scrap than the average workmen should do. In other words, they use 10 per cent more material to produce a given piece of product than is necessary.

More supplies are used up with new men than with old, first, because they do not know how to handle them, and waste them, and secondly, they produce more bad work which has to be refinished. The first lot of supplies used by new men in making the finished product is lost entirely.

Regarding the last paragraph of your letter which asks for definite figures showing the difference in cost per unit when our factory is running at 100 per cent capacity and when it is running at 75 per cent capacity; on the latter figure our factory cost per unit is 20 to 22½ per cent higher than at full capacity.

The reason for this, of course, is that when you are cutting down the productive capacity it is very hard to reduce to a minimum your force of engineers, foremen, inspectors, firemen, truckers, and such incidental labor, and your general overhead expenses are to a great extent stationary.

PART III

THE INCREASE OF KNOWLEDGE ABOUT UNEMPLOYMENT

What should we do about unemployment? It is obvious that we will not comprehend and cannot intelligently attack a problem that goes as deep into the industrial organization of society as does unemployment, so long as we know so little about it as we do now. The scantiness of our present knowledge of unemployment has already been pointed out. It does not enable us to attack unemployment much more successfully than did the ancient physicians attack physical illness in the days when medical science consisted only of a series of magical spells and potions. Our most fundamental need at the present time in attacking unemployment is to know something about it—its facts, its causes—and its significance.

It was with the object of contributing more definite information to our knowledge of Philadelphia's unemployment that the City of Philadelphia invited the Metropolitan Life Insurance Company to conduct an unemployment canvass among its policyholders during the past winter.

Unfortunately this information, while of invaluable aid in throwing light on the amount of unemployment in the past winter, is of little help in throwing light on the actual amount of unemployment that may exist at any time in the future.

As a means of supplementing the Metropolitan canvass, arrangements have been made with the State Department of Labor and Industry that it should collect at regular quarterly intervals, statistics of unemployment and employment in Philadelphia which will give a usable, even if inadequate, basis for estimating the amount of unemployment there is at any particular time in the future. The names of 250 manufacturing concerns, chosen so as to be as nearly typical of all sizes and kinds of manufacturing industries as possible, were submitted by the Department of Public Works. The plan provides that the Department of Labor and Industry will collect monthly statements from these firms and compile the figures, showing for one particular week:

1. The number employed,
   Full time
   Part time
   At normal operating capacity
2. The number of hours worked per week
3. The total payroll (excluding salaries),
   Actual for week of
   When running to capacity

These statistics should furnish a fair basis for estimating the variation in and amount of unemployment in the important manufacturing industries of Philadelphia at the canvass periods. By properly "weighting" the statistics for each different industry, according to the importance of that industry in the city as indicated by census figures, it will be possible to form some idea of the extent of unemployment in Philadelphia manufactories, as a whole, at these canvass periods. In order not to disclose the business conditions of individual firms, the names of the firms from whom figures are collected are not given. Since Philadelphia is basicly and preeminently a manufacturing city, these figures will be sufficiently representative of the city as a whole to furnish a usable, though inadequate, clue to future conditions. As a result, we should not be in the future in such a quandary—whether unemployment is serious enough to justify ultra-heroic measures—as we were in the past winter.

These two sets of statistics will furnish but the barest outline of the knowledge we need. Over and above general data, we need the closest and most detailed analysis of the causes, extent and effects of unemployment in each important industry. It is only by such studies that we will be enabled to discuss unemployment intelligently.

Every organization interested in making Philadelphia a better city, industrially and socially, has an opportunity and a duty to forward the collection and discussion of the facts of unemployment in this city. The causes and facts of unemployment differ so widely in different industries, and even in different phases of the same industry, that any investigations taken up should be concentrated upon a study of a single industry. The Consumers' League has perhaps the best opportunity to throw light on conditions in certain Philadelphia industries by including a study of the amount, cause and results of unemployment in the industries which

it investigates. The Wharton School of the University of Pennsylvania should take the lead, in the community's efforts to study the problem. A course in unemployment should be offered. Eventually a department of unemployment would be established which shall give graduate and undergraduate courses in the subject; whose graduate students shall be assigned to investigate facts and results; and which shall assist in forwarding and coördinating the efforts of the various agencies that are studying the situation in Philadelphia. The Pennsylvania Training School for Social Workers is another agency that we naturally expect to forward such discussion. Yet its roster of courses for the year 1914–15 contains no course on unemployment. Every school, every church, every club that is interested in social and industrial questions has a chance to encourage and push the discussion of a question so vital to the industrial and social well-being of the community.

PART IV

THE MANAGEMENT OF EMPLOYING CONCERNS IN ITS RELATION TO UNEMPLOYMENT

Philadelphia employers cannot afford to disregard the injury received from unemployment. No community can, without grave concern, witness the degeneration of its working classes through unemployment, nor can it be oblivious to the terrific injury to its industrial interests through unemployment. The obligation, therefore, rests upon the entire employing community to do everything that is humanly and financially possible to reduce this evil.

Philadelphia's methods of meeting her unemployment during the winter of 1914–15 cannot be regarded for a minute either as permanent or ideal. At best, charity is not a satisfactory solution of unemployment. Our charitable methods during the past winter were particularly unfortunate. In this connection, we should freely recognize the very remarkable administrative efficiency and the spirit of public service and actual accomplishment which characterized the Emergency Aid Committee. It may even be granted that, in lieu of better measures, such steps may possibly be necessary, in unusually severe times, in order to prevent suffering. At such times we "face a fact, not a theory." But we must not consider charity as a satisfactory way to meet unemployment. Such a program tends to pauperize a community, invite shiftlessness and discourage self-reliance. As Jeff Davis, king of the hoboes and manager of the Hotel De Gink in New York, puts it, "If you pay people to beg they will beg; if you pay 'em to work, they'll work." It furthermore tends to disgrace self-respecting workers and to injure their pride permanently. Emergency committees and public aid can be justified only in cases of severe extremity, under conditions analogous to those in a hospital, where a very dangerous and unusual operation is sometimes resorted to in order to save a dying patient's life. The necessity of resorting to charity to handle unemployment, instead of being a solution of the problem, is an admission that we have not solved it. It is a mortify-

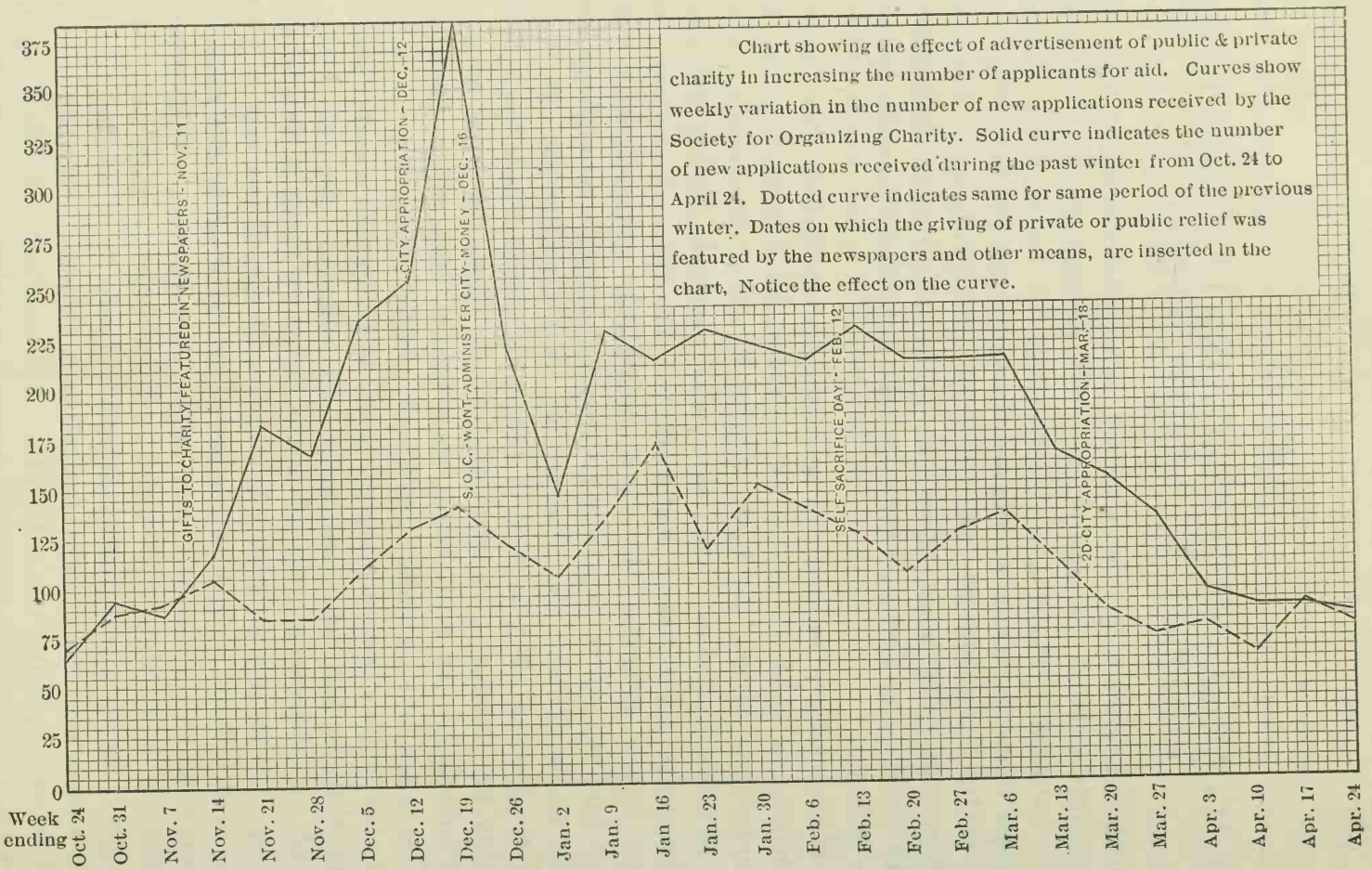


Chart showing the effect of advertisement of public & private charity in increasing the number of applicants for aid. Curves show weekly variation in the number of new applications received by the Society for Organizing Charity. Solid curve indicates the number of new applications received during the past winter from Oct. 24 to April 24. Dotted curve indicates same for same period of the previous winter. Dates on which the giving of private or public relief was featured by the newspapers and other means, are inserted in the chart, Notice the effect on the curve.
375
350
325
300
275
250
225
200
175
150
125
100
75
50
25
0
GIFTS TO CHARITY FEATURED IN NEWSPAPERS - NOV. 11
CITY APPROPRIATION - DEC. 12
S.I.O.C. - WONT ADMINISTER CITY-MONEY - DEC. 16
SELF SACRIFICE DAY! - FEB. 12
2D CITY APPROPRIATION - MAR. 18
Week ending
Oct. 24
Oct. 31
Nov. 7
Nov. 14
Nov. 21
Nov. 28
Dec. 5
Dec. 12
Dec. 19
Dec. 26
Jan. 2
Jan. 9
Jan 16
Jan. 23
Jan. 30
Feb. 6
Feb. 13
Feb. 20
Feb. 27
Mar. 6
Mar. 13
Mar. 20
Mar. 27
Apr. 3
Apr. 10
Apr. 17
Apr. 24

FIGURE 21

ing evidence that we have not been sufficiently "on the job" to create an industrial society in which such catastrophes cannot occur. Unemployment catastrophes are the punishment for our neglect.

The effect that highly advertised charity has in destroying self-reliance and in teaching people to become voluntary paupers is abundantly found in the city's experience during the winter of 1914–15. Shortly after the first appropriation of $50,000 by Councils, large numbers of foreigners appeared before the branch offices of the Society for Organizing Charity in South Philadelphia and demanded "some of the city money" as their inalienable right. Of 94 new applications that came in to the southeast district immediately after the donation of public aid was featured in the newspapers, one of the heads of the Society for Organizing Charity selected at random nine cases that would be roughly typical. Investigation showed that all but one of these cases were not only undeserving, but not even seriously needy. This clogging of the machinery of organized charity with undeserving cases makes it difficult to reach and handle the really needy case at a time when help is most needed. Better evidence of the effect of the wide advertising is found in the sudden and large increase in the number of new applications received by the charitable societies immediately after the appropriation of city money, the formation of the Emergency Aid, Self-Sacrifice Week, etc., became public through the newspapers. The connection between the number applying for charitable aid and the excessive advertisement that is connected with the granting of public relief is seen in fig. 21, which shows the number of new applications received each week during this winter, in connection with the dates on which the granting of relief was featured in the newspapers. Meeting unemployment with charity tends to produce the type of individual similar to a Philadelphian whom we may call "Jack." Jack had been out of work four months. A friend expressed his sympathy and received the reply, "Oh, it's not bad, it's like any other trade after you learn it."

To what extent Philadelphia's advertised philanthropy during the past winter tended to bring into this city the floating vagrants of other cities, it is impossible to say. It is reasonable to

suppose that that result was brought about in Philadelphia during the winter of 1914–15.

Unemployment is primarily a question of industry and industrial organization. The manager of a shoe manufacturing company in Philadelphia asserts that unemployment cannot be reduced to any great extent under the present individualistic, competitive system of doing business. Waiving the question as to whether this fatalism is justified or not, it is obvious that the introduction of a new industrial system is a proposition so doctrinaire that it can scarcely be counted as offering any immediate practicable hope. It behooves us, therefore, to see what can be done under the present system. Since unemployment is an industrial question, the responsibility for ameliorating the evil must rest primarily upon the shoulders of those in control of modern industry, regardless of whether the unemployment be due to individual management of a business or to broader economic considerations. It is distinctly up to employers to attack the problem more seriously than they, as a whole, have heretofore; whether they do it from altruistic motives or because of the fact that, in the long run, it is the wisest business policy. It is up to them, even if it involves as fundamental changes as a certain large manufacturer implies when he says, "To secure uniform daily production, and to partially eliminate the evils of seasonal production, require practically an entire reorganization of the business with this as one of the primary objects. It is not a part of the organizing methods; it is a primary objective and must permeate every fibre of the whole institution."

Philadelphia boasts that she is the "World's greatest Workshop." In few ways can her employers more certainly insure that this phrase shall remain true than by eliminating unemployment. Philadelphia, free from unemployment, would attain a degree of prosperity at present undreamed of. If injury to our community, through unemployment, continues to be disregarded we may endanger our crown.

What steps in dealing with unemployment are the more advanced, progressive and thoughtful employers taking which point the way for the majority to follow?

Before answering this question it must be recognized that the widespread unemployment that results from such unusually

severe industrial depressions as we experienced during the past winter and as are more or less frequently caused by money panics, or "psychological" panics, or European War, or fluctuations in the tariff, is a thing which can seldom be offset by the efforts of the employer, without the risk of endangering his industrial existence. Although he has an obligation, so far as it is industrially safe for him, to furnish employment at such times, the causes of such conditions are not of his making; and such depressions are frequently so severe that he has all he can do to keep his industrial ship afloat. In other words, unemployment is, in some respects, a thing so broad in its origin that effective action to prevent its causes must be nation or world-wide.

To go back to the original question, "What can employers do?" Special study has been made of the textile industries; but many of the illustrations used are from other industries and the points mentioned are, to a greater or less degree, applicable to all industries.

At the outset it must be accepted as a fundamental principle that each employing concern should regard itself as one industrial family for the welfare of whose members the concern is responsible in the way in which the head of a private family is responsible for its members. This fundamental principle must underlie an employer's entire attitude towards his working force and guide all his efforts against unemployment. In the long run this will prove the only sound business policy.

With this family relationship, the 100 per cent ideal, rarely possible of complete attainment, but toward which we should strive, is for each employer and each firm to accept responsibility for keeping a certain definite number of employes steadily employed—without overtime and with the minimum possible changes in personnel. This number should be the "rating" which each firm gives itself as the number it can keep steadily employed. As one very progressive and successful employer writes:

> Many employers do not realize their duty to keep their working force intact under all conditions, with the exception of the very most unusual and aggravated cases of industrial depression. The keeping of the working force intact is not only a duty of the employer toward the employe and to the community, but it is on the face of it the only sound business policy. I believe not only that all public agencies should educate the employer toward the importance of this policy, but

that they should also educate the employer to the fact that vocational and periodical depression must be looked for and should be provided against in prosperous times, at least to such an extent that a definite, sound and just policy is assured to the employe and to the community, if not more material help in some instances.

1. Obtaining and Analyzing the Facts in Each Individual Plant

The first need of each individual employer, just as with the community as a whole, is the need for more information. Enough has been said to show that a large percentage possesses nothing but vague information about their own conditions. In order to know just what the amount of unemployment is in his firm and just what are the various causes, each employer should collect daily records which would show, by departments and tasks, for each day, week, quarter or year, the following:

1. Total number of employes in mill
2. Total number of absences
3. Causes of each absence
4. Actual payroll
5. Total payroll if all nominally on the payroll had been working full time
6. Actual number of hours made in plant
7. Total number of hours made, if all on payroll had been working full time (deduct national holidays)
8. Number of new employes
9. Employes laid off:—
   - a—Total number
   - b—Good reasons (marriage, death, promotion, etc.)
   - c—Where individual was responsible
   - d—Where firm was responsible
   - e—Where responsibility was uncertain

This information would enable a firm to compile for any given period information to show:

1. The modulus of employment (*i.e.*, the percentage of full time worked by employes). This would be ascertained by determining the rates between the actual total number of hours worked in the plant during the year and the number which would have been worked if all on the payroll had made full time (barring national holidays),—as follows:

$$\text{Modulus of employment} = \frac{\text{actual total hours worked per day, week, month, etc.}}{\text{total hours worked if on continuous. full time operation during same period.}}$$

2. The causes of unemployment and the importance of each, thus indicating definite points for the firm to attack its own unemployment problem.

3. The labor turnover (*i.e.*, the relation between the number of unnecessary hirings and the average number employed).

On a basis of information collected by these records, a firm may determine just what its own labor turnover is for any given period. Labor turnover in its relation to unemployment is discussed on page 63.

The daily report used by one firm to collect information of this character is shown below:

ABSENTEE, TARDY AND NEW EMPLOYE REPORT FOR THURSDAY, MAY 20, 1915

Number	Name	Operation	Reason	Time
		Absentees Returned (7)		
148	Barbara Zajicek ..	Flps. and wlts. stchd.....	Sore throat and backache ..	x 1 da.
300	Maud Cashin.....	Foreman.....	Father was sick.....	x 1 da.
937	Helen Augustine ..	Sle. swd. in.....	Per. funeral.....	x 1 da.
938	Mary Hoeffler	Sle. swd. in.....	Per. funeral.....	x 1 da.
969	Steve Dianiska ...	Shou. and slve. fin.....	Per. naturalization papers..	x 1 da.
1163	Mike Jost.....	Elevator man.....	Sick.....	x 2 da.
		One Day Absentees (5)		
S. M. R.	Joe. Cavath.....	Mach. inspector	Per. went to court.....	1 da.
737	Theresa Gedeon ..	Cts. trnd. bott. tckd.....		
748	Julia Broch	Col. cor. tckd. and feld.....	Sick yesterday.	
751	Agnes Anek.....	M. H. col. tckd. and feld. ...	Tel. sick.	
1382	Irene Steenstra ...	Lpl. and fronts exmd.....	Sick yesterday.	
		More Than One Day Absentees (2)		
41	Charlotte Marquardt.....	Route clerk.....	Tel. sick.....	x 2 da.
164	Adelia Fleger.....	Top. pkts. made.....		2 da.
		New Hands (5)		
843	Minnie Matuska			
769	Alma Diffenback			
1050	Mary Bugar.....	Former.....		
2375	Mary Tarnovsky..	Former.....		
2385	Stella Beth.....			
		Quitter (1)		
1261	Mary Haluska....	Butt. swd. on.....	Married.	
		Tardy (0)		

By means of this record this firm was able to say at the end of the year:

Actual full time working year	48	weeks
Actual amount of time employes could have worked in year	45.2	"
Actual amount of time employes actually did work in year	42	"

2. Incomplete Methods of Determining Costs

It is not surprising that with such vague knowledge of unemployment as generally prevails, mistakes should be made as to whether it is better business to run or stand idle in certain bad times. As a matter of fact employers very generally underestimate the loss of an idle plant and over-estimate the loss incurred by running during slack times. An expensive haste in shutting down plants in bad times results. The theory held by cost accountants that all the expenses of operating and maintaining a factory must be included in the cost of the output produced serves to increase unemployment by inducing firms to shut down when good business policy demands that they should run at what is apparently a loss. In slack times, when demand has fallen off, the entire expense of maintenance and operation is saddled on to the small output, an apparent high cost of production per unit results. Accordingly the firm hastens to shut down to avoid "running at a loss"—and frequently does not even consider reducing prices—as its selling department may wish—in order to stimulate demand.

Newer cost accounting methods are pointing out the fallacy of this system, insisting that the expense of supporting a part of the plant in idleness is a business expense and should be charged to the business and not into cost of the product. Under this plan, while the plant as a whole might be losing money, a particular department might be making a good profit over its own cost of production. By thus separating the cost of idleness and the actual cost of production, it appears that it will frequently be better business to run when the plant as a whole is seemingly running at a loss rather than to shut down and carry those as well as greater losses in idleness. One authority on this subject asserts he will shortly be able to prove that it will pay an employer to run a department at what prevailing cost accounting systems would conclude to be a 25 per cent loss.

3. Maintaining an Excessive Labor Reserve

Many firms retain more people on their payroll than they can keep busy. The inevitable result is that some of the employes spend a good deal of their time on the streets or else, as is more often the case, the unemployment that results from this situation is "passed around" among the entire force and a great majority of the working force spend a very large percentage of their working time on "part-time." Taking this year in and year out, the accumulated amount of lost time or unemployment is tremendous.

This situation is illustrated in the lace industry. The prevalence of unemployment among the lace operators through good years and bad (see page 7) shows that there are more workers in the five lace firms in Philadelphia than the business can make use of. Fig. 22 shows the actual output in one firm for the lace department for each month of the last three years, as compared with the approximate output possible if the lace weavers had been running full time.

Firms follow this practice of keeping an excessive number on their payrolls for a variety of reasons. The employer wishes to hold as large a labor reserve as he can so that, if a sudden order for rush delivery should come, he is in a position to put all hands on full time and turn the goods out in a hurry. Or there may be, for a short period of each year, a tendency to fall behind in deliveries; some employers keep enough help on part time, nearly all the year, just to supply their customers promptly at the period of maximum pressure.

A second reason for holding an excessive force is in order to discourage efforts on the part of employes to secure higher wages or other favors which the firm may not desire to grant. When there is a lot of slack time in a plant, employes are less apt to cause trouble by asking for favors. On the other hand, when orders are crowding the firm, the employes have the advantage of a better bargaining position, and consequently use the favorable opportunity to obtain what they want—witness the numerous strikes at munitions plants in the United States during the spring and summer of 1915. In order to obtain the whip-hand in the situation, especially in highly unionized industries, employers endeavor to obtain an

excess of men and machines so that part time may become the rule rather than the exception. One prominent Philadelphia hosiery manufacturer says, "Yes, I want to have enough help and machines so that my help will regularly get through the day at half past three or half past four or five o'clock. They don't ask for higher wages then as they do when they see orders piling up." This situation is apt to manifest itself by a firm having a number of plants in different localities, most of which do not ordinarily run at full capacity, or furnish full-time employment. When a strike at any one plant occurs, it costs the company little or nothing to divert the orders to its other plants. Since it can continue the strike indefinitely with no extra cost, it is sure to win.

A third cause which leads to this situation is a decline in an industry or the failure of an industry to grow as fast as had been anticipated when the expansion of plant took place. In the over-expanded plant, the only advantage to be secured from the otherwise unproductive investment of capital is to keep force enough to man the entire plant—and distribute the work among them all. The excess labor reserve insures prompt deliveries and tends to discourage labor agitation. Under these conditions, labor unions frequently insist upon the firms distributing the work among all those in the trade. Labor unions thus help to hold workers in decaying trades; and the worker himself feels that by leaving his present trade he may sacrifice his skill, endanger his family and perhaps miss an unexpected boom in the present work.

In the fourth place, employers fail to train certain members of the working force to perform more than one single specialized task. This means that each department, each floor, each task must either carry or have available a sufficient number of workers to satisfy its maximum demand for employes. This practice is illustrated by the case of a large hosiery mill in Kensington. In the doorway of that plant ready to insert in the "Help Wanted" sign were the following list of occupations:

Examiners
Boarders
Winders
Knitters
Girls

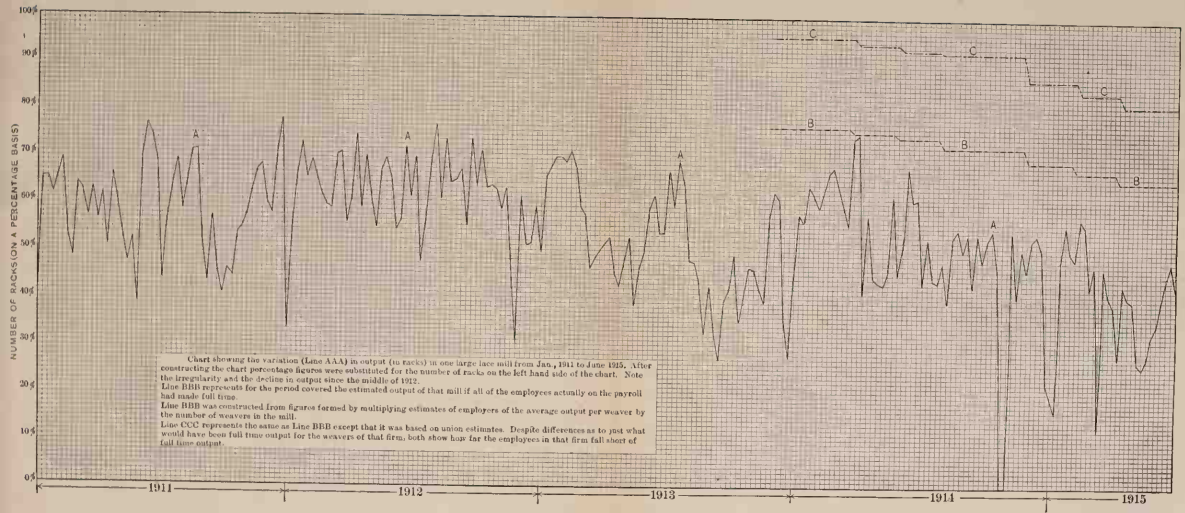

NUMBER OF RACKS (ON A PERCENTAGE BASIS)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
A
A
A
A
B
B
B
C
C
C
1911
1912
1913
1914
1915
Chart showing the variation (Line AAA) in output (in racks) in one large lace mill from Jan., 1911 to June 1915. After constructing the chart percentage figures were substituted for the number of racks on the left hand side of the chart. Note the irregularity and the decline in output since the middle of 1912.
Line BBB represents for the period covered the estimated output of that mill if all of the employees actually on the payroll had made full time.
Line BBB was constructed from figures formed by multiplying estimates of employers of the average output per weaver by the number of weavers in the mill.
Line CCC represents the same as Line BBB except that it was based on union estimates. Despite differences as to just what would have been full time output for the weavers of that firm, both show how far the employees in that firm fall short of full time output.

FIGURE 22

Boys
Pairers
Toppers
Loopers
Folders
Welters
Menders

In answer to a question whether workers were ever trained to do more than one task so that an excess of workers in one department might do work in another department, the head of the firm answered "No." Perhaps this answer should not be taken literally, since in almost every hosiery concern employes are shifted from one task to another. However, it is true that there is too great a tendency to train workers for one and only one task in most manufacturing concerns.

In front of a large clothing house in Philadelphia there is a bulletin board on which the concern is constantly making known its wants for workmen and workwomen. It recently read:

Ticket girls
Sewers
Girls
Edge basters
Feller hands
Canvas basters
Pressers

It is not known whether this firm trains a percentage of its employes to work interchangeably in different departments as occasion may require or not. However, this bulletin board list, taken in connection with the list that hung in the doorway of the hosiery firm, shows the specialized ability sought even in simple operations. It also serves to illustrate that unless an employe, who works at such a detailed task, is trained to do more than one thing, he or she must in a great many cases be subject to much irregular employment. If one department cannot call on employes in some other department to help it over a busy period, it must either carry normally an excess of workers, or frequently call in and lay off extra help as required. With each department thus carrying a separate margin, the labor reserve for the entire plant

mounts high. No matter whether it is the practice of the firm to lay these extra men off as soon as the need for them ceases, or whether they are all retained and the work rotated among the force, unemployment to a large degree must result.

This reserve trouble is being, to a considerable extent, obviated by using as far as possible a common reserve for different departments. In the lower grades of work, this is done simply by seeing to it that before such labor is laid off, there is no work in any other department. In the higher grades of help, however, the problem is more complex. Some few firms systematically train all or even a small portion of their help to do (well) two or three tasks other than chosen specialties. All departments then have a common reserve, which can be shifted as occasion demands. Or, if a wide seasonal change in the nature of the work takes place, the majority of the members of the working force simply change to a new occupation. This accomplishes, at least, an avoidance of an excessive labor reserve for that plant and continuity of employment for those on its payroll.

The superintendent of a large printing plant (outside of Philadelphia) who has followed out this idea in training women workers described their methods in a letter as follows:

> Many of our girls know how to operate three different machines and are expert at one or more of the manual operations, such as pasting, gathering, hand-folding, gold-laying, etc. That they have this knowledge is due to the fact that scientific management has
>
> *First:*
>
> Demonstrated the advantage both to the firm and employes of training workers to do more than one kind of work.
>
> *Second:*
>
> Made it possible to select employes who can learn to do the different kinds of work efficiently.
>
> *Third:*
>
> Furnished facilities for training the people in the shortest time and with the least effort.
>
> *Fourth:*
>
> Furnished an incentive for the worker. This incentive may be either financial or the opportunity for advancement or both.
>
> With these selected and trained workers, with a normal amount of work, our regular employes will have practically no lost time even during the slack season,

and their pay should average from 20 per cent to 30 per cent more than under the old system. Workers properly taught soon become bonus earners. Having earned bonus on one kind of work they "get the habit" and when put to other work are not satisfied until they can earn bonus on the new job.

The training of workers to do several kinds of work efficiently, the central control of the work and good routing make it possible:

1. To do a certain amount of work with fewer employes
2. Reduce cost
3. Give workers a higher wage
4. Give workers more steady employment
5. What is perhaps most important of all, it stimulates and develops the workers

There can be no question but that without scientific management we could not have trained the workers to do the different kinds of work and they would not have had as regular employment.

A convenient mechanism which assists in this work is an expense charge symbol which we call "retainers." In case we have a high-priced employe and give him work of a somewhat lower grade than that which he is accustomed to perform, our cost-keeping system permits us to charge the excess up to "retainers," which latter is then spread as a general business expense over the whole product. We use the same accounting device for taking care of the superannuated employes who are no longer able to compete in the matter of output but the question of whose discharge cannot be considered.

In some cases the responsibility for not reducing the labor reserve does not rest with the employers. Labor unions not infrequently oppose the training of employes to do other tasks, under the impression that each trade, by defending itself from the entrance of outside workers, is bettering itself. While some immediate gain may accrue to the trade thus protecting itself, it is a practice that surely does not benefit labor as a whole; and it is doubtful whether, in the long run, it will benefit the trade involved, since conditions will frequently be reversed.

4. Reduction of the Labor Turnover

By the term "labor turnover" is ordinarily meant the proportion between the total number of persons hired during a year and the average number employed during the year. For example, if a firm requires 500 persons to run its business, and, during the course of the year, has passed through its doors 500 more without enlarging the force, that firm is said to have a labor turnover of 100 per cent.

This method of determining labor turnover is too crude to be

of much use. Figures of turnover so gathered have little or no significance. One year the amount of necessary hiring might be very high due to sickness, deaths, marriages, strikes or some other cause over which the employer has little or no control. The following year, due to an absence of these causes, the apparent turnover might be very low. The actual amount of unnecessary hiring and firing may nevertheless have remained constant. To make our labor turnover figures significant, we must separate the necessary hirings from the unnecessary hirings. We must separate the necessary hirings which grow out of an enlargement of the plant or which are necessary to replace unavoidable withdrawals due to sickness, promotion, death, etc., from the unnecessary hirings, which are in large part the result of poor management in the choosing, assigning, directing, etc., of employes. It is this unnecessary hiring which indicates industrial turmoil and it is this that our labor turnover figures should measure.

To determine such a refined labor turnover there should be deducted from the total number hired during the year the number by which the force was permanently increased during the year. This increase should be determined by subtracting the average number on the payroll at the first four paydays at the beginning of the preceding year from the average number on the payroll at the first four paydays of this year. This might be a minus quantity. Moreover, there should be deducted from the total number of hirings the number of excusable or necessary withdrawals. The proportion which this bears to the total number on the payroll represents the refined labor turnover. The total number on the payroll is found by securing the average number on the payroll at the various paydays.

For example, we may suppose that a firm had an average number on its payroll of the year of 500. During the year 500 persons may have been hired. The permanent force may have been increased by 50 and there may have been necessary withdrawals amounting to 25 during the course of the year. To provide for the permanent increase and replace those who withdrew for an entirely unavoidable cause, this firm, therefore, was justified in hiring 75 persons. Deducting these necessary hirings from the total number of hirings, we may assume that the total amount of

unnecessary hirings amounted to 425. In other words, the firm had a refined turnover of 425/500, or 85 per cent.

Even this "refined" process represents but the crudest sort of method of determining labor turnover. The investigation and study of labor turnover is only just beginning.

The question that immediately comes up is: What is the connection between labor turnover and unemployment? Surely, if "A" is discharged and "B" is hired to take his place, the number employed or unemployed is not altered. However, high labor turnover does affect unemployment in the following fundamental ways:

In the first place, as one manager puts it in a letter: "The answer is obvious, however, to anybody who has been engaged in employment work, that all these moves break down the self-reliance of the workers and decentralize the problem to such an extent that it makes it difficult to study. I know, in particular, of one man who was found, through circumstances over which he had no control, to change his job eight times during one year. At the end of that time he was estimated to have declined 50 per cent in efficiency from that cause alone." In other words, the rapid shift, or flow of labor from shop to shop, tends to increase unemployment by taking men from the more efficient classes—in which workers are apt to be scarce—and placing them in the ranks of the less skilled and unskilled groups which are usually already overcrowded.

In the second place, as long as there are frequent changes in personnel in many classes of labor, by just so much will there be less chance for the development of skill and a good personal relationship between employer and employe. Without these abstract assets the average employer feels less financial and personal incentive to "hold on" to employes by furnishing steady employment.

In the third place, a generally high labor turnover creates an excessively high labor reserve in certain industries. With the kaleidoscopic movement of labor in and out of factories the actual requirements of an industry can be but vaguely known. The man who is "out" does not know what the demand for help in his particular line of work is. He feels that, anyway, the kaleidoscope will soon displace some one from a job and give it to him. This reasoning that "I will soon get a chance" brings an excess of workers

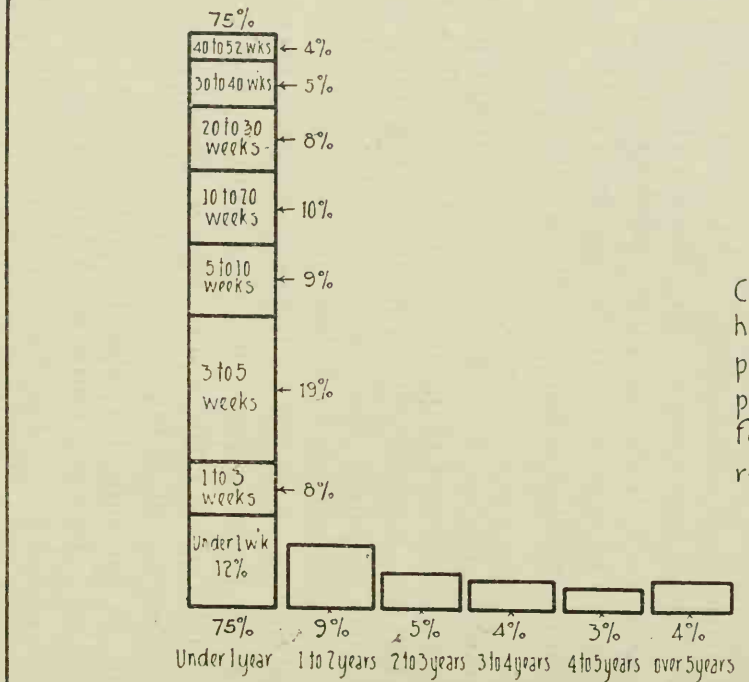


Chart showing length of time male employees hired from 1907 to 1915 remained in the employ of one representative Axminster carpet firm in Philadelphia. The chart for female employees shows almost parallel results.

FIGURE 23

into many industries, and unemployment results. The best illustration of this is found in the dock situation (see page 29).

Finally, in the fourth place, employers are just beginning to realize the costs to them through high labor turnover. If they fully appreciate the money loss that is sustained through excessive hiring and firing—through high labor turnover—and if they realized that irregular employment was one of the important causes of high labor turnover (see page 43), they would give more earnest attention to the problem in their plants.

As one employer, who has made a careful study of labor turnover, puts it, "The real point of the matter (so far as unemployment is concerned) is that if you have a trained worker, say at $18 a week, and it becomes evident that work is going to be slack for ten days or a couple of weeks, it is cheaper to retain the man, with his experience and knowledge of the company's way of doing business, than it is to engage a new man, without experience, at the end of that period. This argument can be pushed too far, but at present hardly any attention is being given to it at all."

How great is the active labor turnover among Philadelphia firms? Few firms make any attempt to keep records on this subject. In order to measure roughly the extent of this indifference, all of the firms on twelve squares of one of the leading streets in the textile district of Kensington were canvassed. Of eleven mills who were willing to discuss the point, all had no records of the size of the labor turnover—at best only a rough idea. To supplement further this conclusion, twenty-five confidential letters of inquiry were sent to representative textile firms. Of the seven answers received, only two possessed any records which showed the size of the labor turnover.

In a textile firm employing labor of medium skill, a study was made of the labor turnover, and the speed of the movement of labor through the shop in the Axminster Carpet Mill "A." The foreman had kept a list of the dates on which help entered and left his employ for the period of 1907–15. In this mill, as has been before pointed out, conditions were favorable for a low turnover, because style was not such an important element in the goods, and slack seasons could be used to pile up large quantities of stock. By compiling the foreman's records it was found that 75 per cent of the men and 66 per cent of the women employes remained in the em-

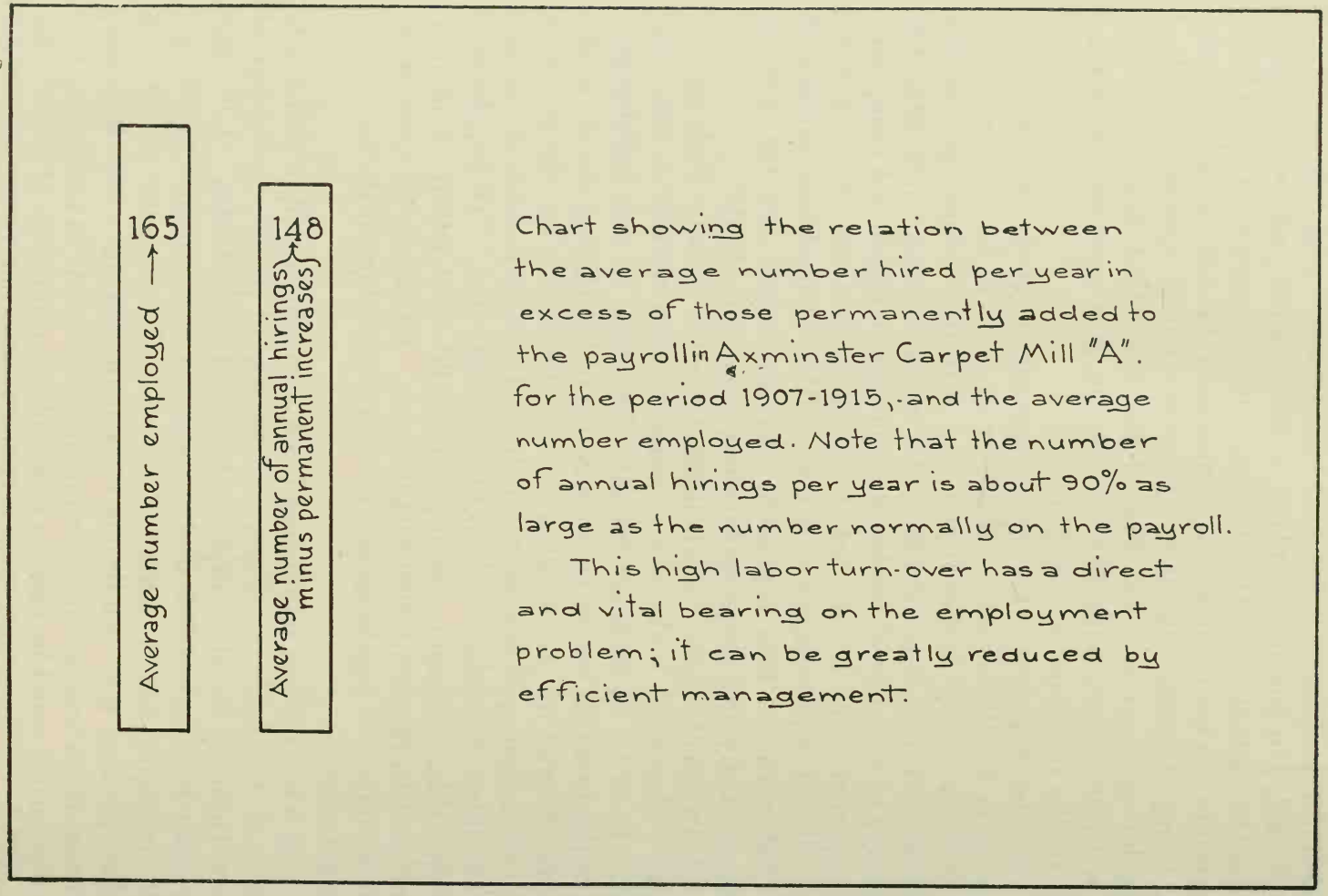

165
Average number employed
148
Average number of annual hirings minus permanent increases
Chart showing the relation between the average number hired per year in excess of those permanently added to the payroll in Axminster Carpet Mill "A". for the period 1907-1915, and the average number employed. Note that the number of annual hirings per year is about 90% as large as the number normally on the payroll.
This high labor turn-over has a direct and vital bearing on the employment problem; it can be greatly reduced by efficient management.

FIGURE 24

ploy of the firm less than one year. They also showed that 48 per cent of the men and 37 per cent of the women employes remained in the employ less than ten weeks. Yet the foreman asserted that "most of the employes do not do good work until they have been with us eight weeks." During the process of compiling these statistics he evidenced considerable interest. On seeing the final results, his comment was, "Who'd a' thought it?" These results are shown graphically and in greater detail in fig. 23.

The above figures represent merely the speed with which labor flows in and out of the shop. Measured in terms of the annual number of hirings in excess of the permanent increases, the average of such hirings was found to be nine-tenths as great as the number of employes. This is shown graphically in fig. 24.

Many concrete illustrations of the size of the turnover in many Philadelphia firms might be cited. In view of the absence of any comprehensive information for Philadelphia, a study made by Magnus Alexander, of the General Electric Company, throws general light on the size of the labor turnover. The result is probably fairly typical of Philadelphia. Mr. Alexander made a study of the size of the labor turnover among all classes of employes (except those belonging to the commercial and engineering organization and the general executive staff) in a large number of factories of all sizes in the United States and Europe. This study was made during the year 1912—which may be considered a normal industrial year. The investigation showed that the labor turnover (including necessary and unnecessary hirings) of these firms was over 100 per cent. On January 1, 1912, 38,668 persons were employed in all of these concerns. On December 31, 1912, 46,796 persons were employed. The increase in the working forces during the year, therefore, totalled 8,128. Yet, the records show that during the same period 44,365 people were engaged, indicating that 36,237 people had dropped out of the employment during the year. In other words, about $5\frac{1}{2}$ times as many people had to be engaged during the year as constituted the permanent increase of force at the end of that period.

Making allowance for the increase to the force, and for removals by death, illness and other unavoidable cause, Mr. Alexander concludes that practically the engagement of 22,140 could readily be

defended. What should be said, however, of the fact that 22,225 were engaged above the necessary requirement?

The wide scope of this study makes it reasonable to suppose that its results are, on the average, typical for the mechanical industries in Philadelphia as well as for any other industrial center.

Altogether aside from the degenerating effect of this state of affairs on the employe, it represents a big leak to employers. Different Philadelphia employers estimate the cost of unnecessarily discharging an average wage-earner at from $30 to $100, but here also there is little real knowledge of cost. Mr. Alexander's figures may be taken as typical. Based on estimates by employers for different classes of labor, Mr. Alexander figures that the loss incurred by these firms in unnecessarily hiring 22,225 persons during the year 1912, as approximately $775,000. How little this loss is appreciated among Philadelphia textile firms as a whole is shown in the statement above referring to the small percentage of firms who keep records.

Granted the situation and its cost to employer and employe, what can be done about it? It is a well established fact that high labor turnover can be very largely and profitably reduced by greater care and efficiency in management.

The experience of one Philadelphia concern, manufacturers of a standard product which is almost without seasons, is significant. This firm employs nearly 1,000 persons. In 1911, when it first began to consider seriously the problem of excessive hiring and discharging of help, its turnover (based on necessary and unnecessary hirings) was 100 per cent. The next three years witnessed a steady reduction in the turnover, which, by 1914, was less than 20 per cent. Equally significant of the possibilities in the reduction of labor turnover is the case of a textile firm well known for the consideration shown for the welfare of its employes. This firm has a turnover so low that there is a common saying to the effect that if a ——— man is "on the streets" there's something wrong with the man.[7] The experience of a third firm, a cloth firm outside of Philadelphia, simply adds evidence that it is within the power of individual managers to reduce the labor turnover. This firm, by a

[7]Yet it is significant that when this firm, one of the best managed in Philadelphia, recently increased its force by 300, over 2,200 persons had to be hired to secure the 300.

scientific study of the problem, and as a result of earnest efforts to secure employment, reduced its turnover by 80 per cent from June, 1910, to July, 1914.

What are the methods used by these firms or approved by the more progressive employing concerns by which this terrific cost can be reduced, after management once becomes aroused to the importance of the problem?

It is apparent that if any impression is to be made on the excessive labor turnover, a great deal more attention and study must be given the "man" problem as contrasted with the "material and machine" problems.

The specific methods used by the above firms, and most widely approved by progressive concerns, to secure a lower labor turnover, are three:

A. Better methods of hiring and firing.
B. Better methods of training help.
C. Reduction of fluctuations in employment.

A. Better Methods of Hiring and Discharging Help

The greater attention to the "man" problem must manifest itself, above all things, in much more attention to and study of scientific methods of hiring and discharging men. The first requirement is that the handling of the employment problem should not be left to the foremen of different departments, but should be transferred to some high grade functionalized employment official or department, according to the size of the plant. As the manager of the cloth firm previously referred to says: "For the employment function, every industrial organization should have some one person or department whose sole business is the study and handling of this problem. This is a function that cannot be administered by some head or underling in an operating department."

Unfortunately, the prevailing practice among the textile firms in Philadelphia is to leave the hiring and firing to the foremen of different departments. The canvass on "X" street (page 67) showed that, of eight firms who discussed the matter, six left the hiring entirely to the foremen of different departments. In two, the hiring was done by one functionalized officer for the entire plant. To supplement this canvass, a number of inquiries were

defended. What should be said, however, of the fact that 22,225 were engaged above the necessary requirement?

The wide scope of this study makes it reasonable to suppose that its results are, on the average, typical for the mechanical industries in Philadelphia as well as for any other industrial center.

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directed to the managers of twenty-five firms scattered at random throughout different lines of the textile industry. Of eight answers, six indicated that the hiring and discharging of help was left to the entire charge of foremen.

The result of this lack of centralized employment is an almost complete lack of touch between the responsible heads and intelligence of the concern and the employment problem. A statement that is applicable to many concerns was made by one of the heads (in charge of records) of a hosiery concern. "We would never know here in the office when a person is being taken on or laid off if their names were not sent down every two weeks to receive pay." In many concerns no one but the foreman has any record even of the names of employes. In the office workers appear as number so-and-so, which, for all the firm knows, may and often does mean, some one this week and someone else next week.

This lax method of hiring and firing by foremen means that the choosing of help is left in charge of a man who is already overburdened with other duties, and who, though he may possess a certain amount of technical skill and aptness in the processes of a particular department, has not the background for the successful employing of men. As a result, it becomes a secondary matter; and misfit employes, who are apt to become discouraged and leave, result. An extreme case of the lack of care under the foreman system is told of a Philadelphia textile factory. This firm advertised for help on a certain day. On the day indicated a large crowd of the jobless had assembled. When the doors were thrown open a mad scramble ensued as each person tried to grab a machine. Whoever got a machine remained. No selection was made. Surely this struggle was not one guaranteed to eliminate the unfit—the inefficient—or accurately fit men to jobs.

In another case, the foreman who was to choose new help threw a number of apples into the assembled crowd. Whoever caught the apples got the job.

The foreman is ordinarily incapable of judicious firing. Too often he uses his power to fire as a means of discipline, or as one large employer puts it,—"to keep the fear of God in their hearts." Perhaps the ideal attitude toward the firing of help is suggested in the case of the large Philadelphia firm who orders a rigid investigation whenever a person voluntarily leaves their employ, to

ascertain why anyone should ever want to leave. The head of one of the largest employing concerns in Philadelphia very deftly suggests the evils of leaving the employment function in the hands of low grade men such as foremen often are, when he says, "Any mutt can fire a man."

Furthermore, the unsupervised authority of the foreman contributes to high labor turnover in the every-day relationship with his employes. Not merely does he bring in misfit help—who will soon leave—and discharges needlessly, but also he unconsciously drives many away by his sheer arbitrariness. One of the largest employers in Philadelphia, who works under the "foreman" system, says, "I have time and again seen my foreman do things that were absolutely cruel; and yet I am powerless to prevent it." A large lace manufacturer told the Philadelphia Secretary of the National Lace Weavers' Union, "I have more strikes and labor disputes as a result of the foolish and arbitrary acts of some foreman than any other cause." Closer supervision of the relationship between foreman and worker by a responsible executive should work toward the eradication of much needless withdrawals from the employ of the firm.

The result of the control of hiring and firing by foremen and the superiority of control by a functionalized employment department is evident from the testimony of the following employers. One employer says:

> I know of cases of foremen who frankly acknowledged to their intimates that they make a practice of discharging so many people once in so often to keep alive a healthy appreciation of the dependence of employes upon them. I know of other foremen who have opinions which practically amount to superstitions, so baseless are they, as to the significance of certain unimportant details in an employe's work or manner. I could go on with such statements almost indefinitely. The real gist of the whole proposition, however, is that the company which is not willing to take a definite stand on this proposition of centralized employment is bound to have a labor turnover far in excess of what it needs to be, with a large consequent expense to itself therefrom, and thereby to contribute to the unemployment problem of the city or town in which it is situated. I have never been quite clear in my mind as to why it is that the average foreman or department head feels his authority to have been impaired when the employment function is taken away from him. Such is the case, however, and it makes a very difficult factor in the problem.

One of the heads of a forging and finishing shop in Philadelphia describes as follows the experience and efforts of their firm in dealing with their own employment problem:

a. *Better control of hiring men.*

It is common practice for the foreman of each department to be given full authority to hire their help.

As foremen generally are not of much higher type than the average workman, this practice is very unsatisfactory. Men are hired without thought as to their fitness for the work they are to do, but simply because they happen to be on the spot when a man is wanted.

As the turnover of help in a factory is such an expensive proposition, it seems advisable to have both the hiring and discharging of men supervised by some executive who can analyze the fitness and qualifications of an applicant.

When foremen need help in a department they can apply to this executive, and from his records he would be able to furnish help as needed and of a type that would be more likely to give satisfaction.

b. *Better control of discharging men.*

No foreman should be permitted to discharge men, as quite often discharges are made as much on account of personal prejudice as on account of inefficiency. Again, discharge for inefficiency is a sign of weakness in the organization, as, if a man possesses the ability to do the work when he is hired it means that the foreman has not fulfilled his duty if the man is a failure, except in extreme cases.

After paying good money to break a man in, it is the height of extravagance to replace him with a green man at an additional expense if it is possible to raise such a man to your standard.

If foremen are allowed to hire and discharge indiscriminately, it often happens that men are laid off in one department when they are badly needed in another, and that green men are hired where needed when such department could have had the pick of the ones laid off.

It stands to reason that a man who has been in the factory in any capacity long enough to know his way around and get acquainted to some degree with the product is a much better prospect for any other department than a green man taken off the street.

Discharges for inefficiency or indiscriminate laying off of help tends to increase the unemployment problem.

c. *Analyzed factory conditions.*

We have found that workmen drift from one place to another if not thoroughly satisfied and that the turnover of labor in the average factory is out of all proportion to the payroll. This turnover results in great expense to the manufacturer, as the breaking in of new help on any work requiring skill will cost at least $50 to $75 per head. The turnover also results in a great increase in the floating idle population of a city.

One of the duties of a functionalized employment department will be to col-

lect data which will throw light on each company's own employment problem. One employer says:

To begin with, what is everybody's business is nobody's, in the employment game as well as anywhere else. Men are picked to run a department on the basis of technical skill or aptitude in the processes of that department, and the employment of people is purely a secondary matter with them. As a result of this, in the first place, records are entirely lacking by which a company can study its own employment problem and learn from experience. If a centralized employment department did nothing else than to compile and issue the statistics of employment, I believe that it would pay any company to maintain such a department. When it is considered, however, that in any industry work is uneven in different departments and that the individual being fired from one department might be a valuable find in some other department which has a requisition in for additional help, the bearing of the question becomes even plainer.[8]

B. Better Methods of Training Help

A second method of reducing high labor turnover is by the adoption of more effective methods of training help. One of the frequent causes of workers quitting is the fact that they can't "get on to the work." While this is often due to innate incapacity, it more often arises out of the lack of any effective system in the plant for the instruction of new men. The supervision of the training in many cases will become one of the functions of the employment department in a large concern.

In many of the textile firms of Philadelphia there is either no system of training at all, or else the training consists solely in the privilege, on the part of the new worker, of watching an older employe for two or three weeks. Of the twelve firms interviewed on "X" street, seven had no training system, but depended solely on securing skilled workers ready made off the streets. In four, new workers were "trained" by being allowed to work with old hands for two or three weeks. Some idea of the thoroughness of such a system in one mill at least may be gathered from the fact that old hands were paid at the rate of $1 per month to "train" new hands. In one of the twelve firms, the foreman did the instructing. Under such a system, it is not surprising that employers should complain of a scarcity of skilled labor, even in the midst of one of the most severe periods of unemployment ever experienced in the textile industries.

[8]A detailed statement of the organization, duties and advantages of a functionalized employment department, will be found in the May volume of *The Annals* of the American Academy of Political and Social Science.

Of the duty of the employer in this respect, one employer, in discussing methods of training, says:

> A new employe, at the best, is undeveloped for the position which he is called upon to fill in any organization, and, as he has been employed in order steadily and permanently to fill a position necessary for the objects of the organization, he needs and is entitled to especial attention in order that he can be developed to fill that position fittingly. Given character and fitness for the organization, the acquirement of skill in the performance of a given duty is generally a matter of proper training being provided by the administrative side of the organization. It must always be remembered that skilled and fit men are not born, but made, and it is an essential function of any industrial organization to train men and make them fit for specific position necessary to the objects of the organization. There is no broader admission on the part of a manager of his own inefficiency and his own lack of comprehension of his duties and problems than the oft heard complaint on his part of the lack of skilled men.

Every improvement in training methods will aid in improving the unemployment problem by transferring workers from that tremendously overcrowded class and placing them in the ranks of the higher skilled, in which there is at present frequently a scarcity.

C. Reducing the Fluctuations in Employment

Obviously the third step in reducing labor turnover will be the need for a more serious study of means by which all forms of fluctuation in employment may be reduced.

Recognizing that the rise in some form or other of functionalized employment departments is a growing thing, and a thing to be assisted; recognizing also that the problems that confront those in charge of employment work in different firms are so complex that every manager needs to profit all he can by the experience of every other engaged in similar work, a number of employers, at the invitation of the Director of Public Works, met and formed the Philadelphia Association for the Discussion of Employment Problems. This is a purely voluntary association for purposes of study, involving, on the part of members, no joint support of each other in labor troubles or of any outside course of action. Its object is to pool experiences and discuss common principles governing employment so that the wastes experienced by both employer and employe resulting from improper selection, direction and discharge of labor may be eliminated.

5. By a Closer Coöperation Between the Manufacturing and Selling Ends of a Concern and the Standardization of Product

It is frequently true that a lack of coöperation between the manufacturing and selling ends of a business breeds a working at cross-purposes, without the joint idea of assuring continuity of production and employment to the manufacturing end.

The textile industries in Philadelphia suffer particularly in this respect. Among textile centers the country over, Philadelphia is conspicuous by the extent to which small mills compose her textile business. A very large percentage of the heads of these mills have at some time in the past come up through the mills as weavers. By dint of energy and frugality these men have been enabled to secure a start and to permanently establish their business. Such a history does not imply a broad business experience. As a result, many manufacturers say, "We are not sellers, we are manufacturers. That's enough for one man." A lack of capital has also contributed to this attitude. As a result, many have confined themselves solely to the manufacturing end and given little attention to the selling end, which has been turned over bodily to sole selling agents usually in New York City.

Under the arrangements made, the selling agent was frequently given a free-handed authority. This gave him power to disregard continuity of production for the employer; and he naturally bent his efforts to selling that which was easiest for himself. Moreover, frequently the manufacturer turned over to his agent the entire job of marketing his goods. The producer could sell through no other source. The seller on the other hand usually sold for a number of others who made the same or a very similar grade of goods. The seller came to represent the entire market to the manufacturer, while the manufacturer represented only a small part of the business to the seller. Out of the better bargaining-position of the selling agent, he obtained an amount of authority that manifested itself in a number of abuses seriously contributing to irregular employment. In discussing these abuses especial reference is made to the hosiery industry (one of the largest branches of the textile industry in Philadelphia).

Abuses: a. In the first place, the agent has nothing to force

him to make serious effort to "back up" the employer. The selling end has expected the manufacturing end to be resourceful enough to cope with great irregularities in orders in good times and bad. When the whisper of hard times was first heard, the tendency was for the agent, who had small organization and little overhead, to "lay down" in his efforts just at the time when the good of the producing concern demanded that the greatest pressure be placed on the selling end. The manufacturer, not in touch with his market, was not able to go out and strive for more orders, even had he been willing and able to do so and had his contract with his agent permitted it. His only alternative was lower prices. On the other hand, one Philadelphia hosiery manufacturer who sells direct, spent $1,000 extra this past winter in pushing his sales so that his organization might be held together over the present winter.

The jobber further reduces the demand for goods at critical times by a considerable reduction of the stock of goods carried as a reserve to supply the trade. Many large hosiery manufacturers in Philadelphia have given the sellers' lack of sufficient effort to secure regularity of orders, in good times and bad, as the chief reason for the firms cutting out the agent and doing their own marketing.

b. In the second place, it is an easy matter, since the goods are not sold under a manufacturer's brand, for the selling agent to divert the orders that have been going to Manufacturer "A" to Manufacturer "B." Although the same number of orders may be coming through to the manufacturing trade as before, still, a long period of unemployment must result before readjustment will be made. On the other hand, where the hosiery is sold under the manufacturer's brand, the orders cannot be diverted, at will, to anyone. They belong to a particular manufacturer. That manufacturer has stablized his market and secured a grip on the only steady element on merchandizing—the consumer's demand. Every phase of his activity, including the employment of labor is, therefore, subject to less uncertainty and fluctuation. By possessing a market for a standardized product, a manufacturer can more readily make to stock and thus run his mill steadily, even though orders are irregular.

An example showing the degree of dominance that the selling agent aims for under the "sole selling agent" system is the case of

a Philadelphia firm. When this firm began to sell direct, the former agent felt so outraged that it publicly announced it would drive this firm out of business in two years.

c. A third abuse is the evil of cancellation. As one textile man said, "The textile business is the most weak-kneed of any I know. In it, a contract is not a contract." Even though an order may be filed with a manufacturer, the goods bought, and even in many cases made up and shipped, in practice the buyer still has the right to "call off" the order. In some years, in certain lines, the percentage of cancellation runs over 50 per cent. A person closely in touch with the hosiery business "very roughly estimates" the average percentage of cancellations as eight. One Philadelphia concern had to close down when it received recall orders from its agent to 85 per cent of a season's orders.

The significance of cancellation, in its relation to unemployment, does not lie in the percentage of orders discontinued, but in the fact that the practice tends to disorganize production and keep employers afraid to "make up" orders until delivery time is near and every possible opportunity has been given for cancellation This creates busy periods just before a season's delivery and slack periods at other times. The hosiery manufacturer who sells direct can and does to a very much larger degree prevent this practice.

d. In the fourth place, the manufacturer who "farms out" his selling does not have his ear to the ground. He is slow to readjust himself to changes in demand—a constant complaint from the selling agent. In a business characterized by frequent veerings in demand, as in the textile business, close touch with the market is particularly vital. As the great expansion of our own manufacturing industries plus the introduction of foreign goods takes place, markets will be better supplied than formerly; the consumer will be given a greater choice in his purchases; and he will be less inclined to buy whatever may be set before him whether it suits him or not. Because the consumer has become king it is essential that industry be so organized as to be in the closest possible touch with the changes in his demand. For example, the hosiery market in the last five years has come to demand less and less heavy cotton goods and more and more thin, imitation silk and silk goods. The manufacturers who are in touch with the market have been quicker to readjust themselves to this change than have those who sell through

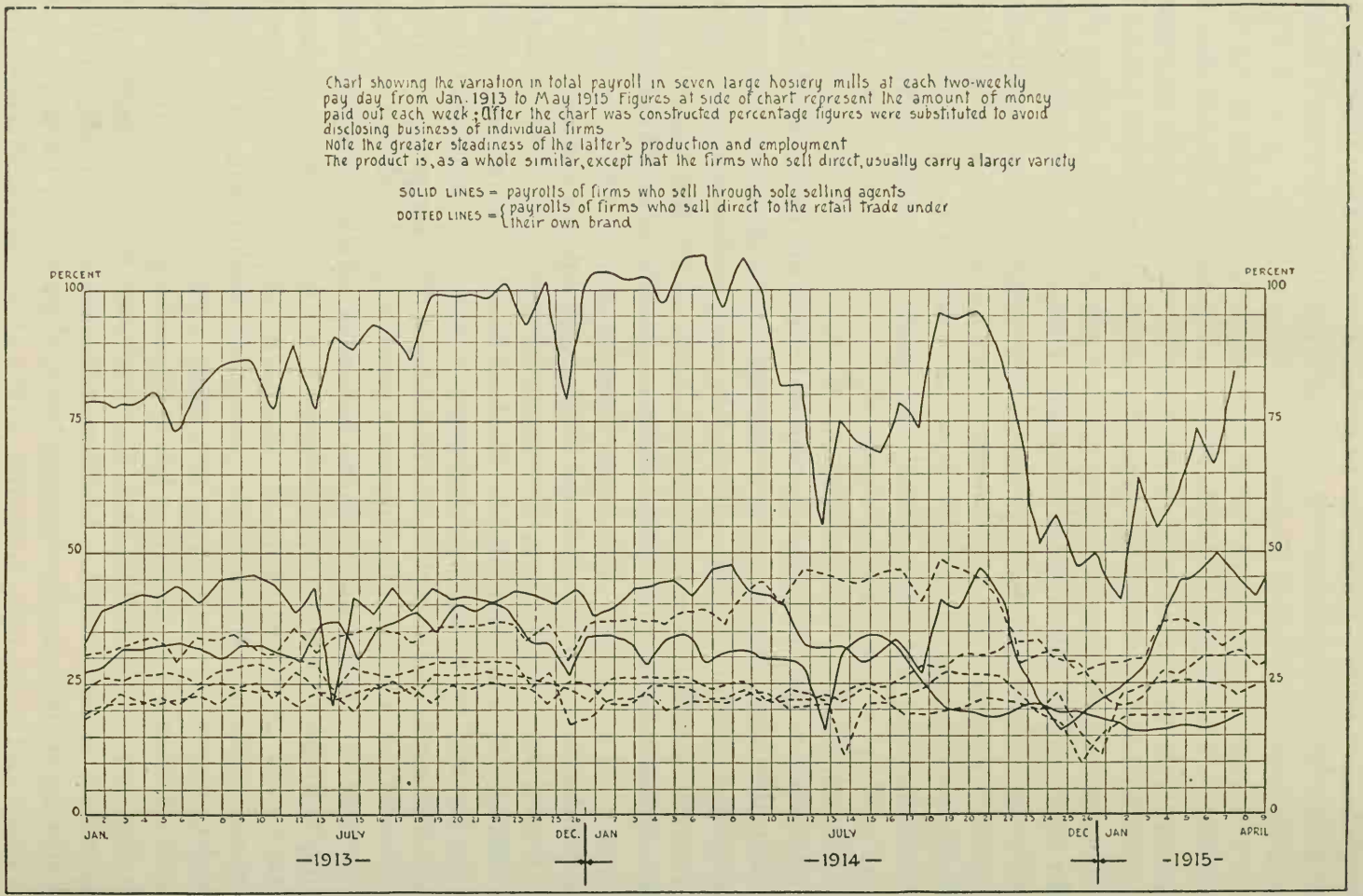
Chart showing the variation in total payroll in seven large hosiery mills at each two-weekly pay day from Jan. 1913 to May 1915 Figures at side of chart represent the amount of money paid out each week; After the chart was constructed percentage figures were substituted to avoid disclosing business of individual firms
Note the greater steadiness of the latter's production and employment
The product is, as a whole similar, except that the firms who sell direct, usually carry a larger variety
SOLID LINES = payrolls of firms who sell through sole selling agents
DOTTED LINES = payrolls of firms who sell direct to the retail trade under their own brand
PERCENT
100
75
50
25
0
JAN.
JULY
DEC.
JAN
JULY
DEC
JAN
APRIL
—1913—
—1914—
-1915-

FIGURE 25

agents. Unemployment results from any such miscalculation of the market.

A final instance of the way in which a Philadelphia manufacturer failed to make the selling end of his business properly articulate with the manufacturing end, may be mentioned in the case of a cloth manufacturer whose agent is primarily the agent of another concern making a totally different kind of goods. The seller "goes on the road" at the time of year suited to the needs of the larger client. This happens to be the the wrong time of year for the Philadelphia cloth manufacturer; so his sales are not large.

It is a significant fact that among the most successful hosiery manufacturers are a number of men who were formerly salesmen in large distributing houses. They know almost nothing about the manufacturing end; they do know how to sell.

In order to show the contrast, in production and employment, between hosiery manufacturers who sell direct under their own brand and those who sell through agents under jobbers' brands, figures were collected from eight of the leading hosiery firms in Philadelphia. These figures give each firm's total payroll at each two-weekly paydays during 1913, 1914 and to May, 1915. The kind of hosiery manufactured by each firm is stated in the footnote. The payroll curves showing a greater irregularity in firms who sell through selling agents are given in figure 25.

What one firm has been able to accomplish, in a seasonal business, through study and control of its selling end is suggested in a letter as follows:

> What we have accomplished in the direction of leveling the curve of seasonable work has been done chiefly through the selling end.
>
> Our business in jewelers' boxes used to be extremely difficult because practically all of the output was made to order and work could seldom be started until May or June, and had to be completed well before Christmas. Our factory, therefore, used to be out of work from the middle of December up to the middle of May, and so seriously overcrowded from that time on that poor service was frequently given customers and our business considerably damaged. A few years ago we began to make earnest efforts to get box orders in earlier. After the first year or so of readjusting, we found our customers were more than willing to help in this work, so that today the majority of our orders reach us between the first of January and the first of June. This requires facilities for holding the goods until the date desired by the customer for shipping, and, of course, ties up capital, but we are able to keep experienced workers busy the year through, are able to give almost perfect satisfaction in service to our customers, and through

the consequent savings and increased business the cost of carrying the goods has been covered several times over.

One striking effect which went way beyond our expectations was the improvement in quality of our output, which under the old system suffered more than we realized through the work of untrained hands and the crowding and strain of the fall season.

Our line of Christmas specialties has been handled in the same manner, though an easier problem, because none of these goods are made to order. Designs for Christmas, 1915, were chosen in July, 1914, then approved and laid out as to the way they should be put up, etc., so that the sample run could be ready by March, 1915. The goods are then sold for fall delivery and the stock manufactured during the first six months of the year.

We have found it possible once or twice to add to our line an item or two that could be made to fill in a gap in regular employment; for example, we introduced Christmas cards printed with steel die in order to keep our die-printing crew at work during a slack three months.

Again, we have made good progress by substituting stock items for specials. For example, certain goods of a standard type, ordered periodically by our sales end, were manufactured special as the calls came in—sometimes in dull times, but more often during a rush period, by selecting certain lines and manufacturing a sufficient stock during the dull months the situation has been greatly relieved.

The containers which are used for our merchandise were formerly made by us at different intervals, but under the new plan the entire quantity is manufactured during the first three months of the year. Many other moves of this sort tend toward further relief.

Our problems are undoubtedly easier than those of some other industries; however, we feel from our experience that if the advantages of regularizing employment become appreciated by the employer, some possible steps will suggest themselves, and these will in turn suggest further steps, so that considerable improvement, if not a big cure, can be effected.

The following is a statement of a Philadelphia forging and finishing firm. This firm has so coördinated its selling and manufacturing departments that greater regularity in employment is secured.

a. Continuity of Employment. By an analysis of factory conditions we have found it possible to minimize the loss of time on the part of our men due to changing machines from one pattern to another by making orders to the factory of the maximum size and by endeavoring to make changes from one size to another in a distinctive pattern rather than a blind change from one pattern to another. By this method we have increased the efficiency of our plant to a marked degree in so far as production is concerned and have cut down materially the average "turnover" of our labor.

b. Complete Analysis of Sales Covering Patterns and Sizes by Months. By the installation of this system we find that some goods are so seasonable that the demand can be anticipated and goods made up in dull months in readiness for

the market. The anticipation does away with non-employment to some degree, and keeps the manufacturer from being overwhelmed with certain items at what is probably a very busy time on other lines. In other words, it levels the peak load and raises the curve of dullness.

c. Dull Business. In times of depression that are so pronounced that none escape entirely, it is necessary to push the selling force with more than usual energy. It is our aim to get out new designs or patterns to create interest and to stimulate business with selling helps for the merchant, pointing out to the retailer that in time of depression it is necessary to approach the retailer problem from a different angle, and that by the use of such helps he can increase his trade. We further try to market new lines of goods in order to keep our working force employed.

A shoe manufacturing concern (outside of Philadelphia) codifies the results of its ten years' experience in attempting to reduce seasonable unemployment (8 to 16 weeks) as follows:

Unemployment:

a. Resulting from: Seasonable demand for product where employes are laid off and work on short time for a considerable period.

NOTE. In the majority of shoe factories, particularly in the large shoe centers, this causes shoe workers to be unemployed for periods ranging from eight to sixteen weeks per annum; in some cases more than this. Many of the employes are laid off entirely but more often are obliged to work on very short time and at greatly reduced wages.

How Improved:

a. By education of distributors to a realization that in the long run this lost time has to be paid for in the product and by getting their coöperation with this company by working on monthly estimates, put in at the beginning of the season. In busy periods customers who order above their previous estimates are cut down on deliveries in favor of customers whose estimates are not overrun. Customers are not held strictly to monthly estimates, but failure to follow them is regarded as a sales problem and is freely discussed.

b. By the manufacture of special goods, made up without orders and sold through a special department created for that purpose. This department sells goods only when allotted to it, and sells them through special distributing channels, giving special values and special terms.

c. By distributing through both wholesale and large retail trade whose deliveries come at different periods.

One automobile concern pushes to the limit the business of coördinating the selling end with the manufacturing end by addressing its sales force in substance as follows: "We can make so many cars of each different grade this year. Now go out and sell that many."

From the foregoing illustrations, the importance of a standardized product is evident, as well as the part which a correlated sales department can consciously play in making possible a market for this product. In lines such as clothing, standardization of even a part of the product is a herculean task. In other lines standardization is relatively easy and can, therefore, be made to assist very materially in the steadying of production. The experience of one firm is a remarkable instance of how a little planning can result in standardizing production. This firm manufactures articles of printed matter used by everybody (*e.g.*, envelopes). They describe their work as follows:

> We have started here with month work along this very line, which we are calling "Standardized Orders" selling 10,000 to 20,000 articles of the same grade and style of printing, the same kind of paper, size, etc., running one order per month of these small orders totaling 1,000,000, etc., guaranteeing delivery of same at the end of the month. This gives us a large monthly stock order made up of a number of units, each unit calling for different electrotype and shipping instructions only.
>
> In this way our prices can be made more attractive, the mass of detail connected with Planning Department is largely reduced and it gives us an even distribution of work, largely reducing the old rush orders, rush periods, overtime or night work, etc., and keeps our force more steadily employed. The profits from a Standardizing Order are very attractive, although the selling price is considerably less.

Not merely is this a good thing for the manufacturer and the employe, but also it is an even better thing for the buyer not to be running out of such a necessary commodity all the time.

6. Time Lost Waiting for Dye (or Other Materials)

Most of the dyeing of textile fabrics in Philadelphia is done by separate firms, apart from the ones in which the dyed goods are made up into fabrics. Only a few firms maintain their own dye-plants. As a result it frequently happens in many firms that, when a fabric of complex pattern is to be woven, it will be fou d that a certain shade of goods has been forgotten. Or, before the garment is completely woven, yarn of a certain shade will run short. While more yarn is sent for, the loom stands idle. In some mills it is a rarity for weavers to make a full week, on account of having to wait for "dye." At times this wait extends to one or two weeks. The secretary of the Brussels Carpet Weavers' Association estimates that in some mills the loss of time runs as high as 16 per cent.

That this lost time can be prevented is shown by many firms in parallel lines of the textile business, which may or may not operate their own dye houses, where the time lost waiting for dye is practically nil.

The problem of time lost waiting for dye is simply a part of the larger time of the daily and hourly interruptions in the plant, waiting for this or that reason. Though apparently small, this loss, in the long run, totals large. A shoe firm measured this lost time and succeeded in eliminating it to a large degree. See the following outline:

LOST TIME OF EMPLOYES THROUGH DAILY AND HOURLY INTERRUPTIONS

Resulting from:

a. Employes coming late; lost time inconsiderable.

How Improved:

1. By "In Late Pass System," a proper investigation by foreman, and discipline where needed.

b. Employes going out or being laid off early, due to lack of work or stock. (Estimate lost time two to five weeks.)

How Improved:

1. By organizing material purchasing and supply system, based on pre-determined sheet system, which gives purchasing departments ample time to purchase all material to exactly meet daily requirements, and to know absolutely when goods must be delivered in the various departments to meet the product in which this material will be needed.
2. By adopting a pre-determined standard daily production and by holding rigidly to it, foremen are enabled to compute accurately the number of employes needed on each job.
3. Pre-determination of employes needed on each operation is facilitated by the fact that all work is piece work, based on standard average production of operation.

c. Lost time due to fluctuation on special operations or in special departments, due to variation in the class of product. (Estimate lost time one-half week.) (Note:—Estimate 10 per cent of employes lost five hours a week, fifty weeks a year, equal one-half week.

How Improved:

1. By system of routing work into factories, not only uniformly in pairs each day, but also uniformly in pairs per day in certain types of product, such as patent leather shoes, bluchers, tan calf, button boots, etc. Where production on these items vary whole operations or departments

> may work under badly fluctuating loads. By routing such types of work into the factory at a uniform rate per day for pre-determined periods these operations are given a steady production, as well as the operations through which the total production passes.

There are many other ways similar to the above by which unemployment problems on special operations or departments can be wholly or partially solved. By keeping constantly in mind the necessity for steady employment it is usually possible to bring about good, or reasonably good conditions.

To secure vacations for employes the entire business is shut down for the Fourth of July week, giving employes an opportunity to get rested just before the hot weather.

June and November are our most difficult months. We formerly closed four days in June and four days in November for stock taking. This was discontinued several years ago. Except for this inventory period there have been only one or two seasons in ten years when factories have been closed, and then only for one to four day periods.

Stopping this kind of unemployment is the business and duty of management.

7. Lack of Balance Between Departments

It is true, in many cases, that one department in a continuous industry will be too large, so that it is capable of producing for the department it feeds faster than this latter can consume. As a result the department that is too large must lay off and wait for the other to catch up. This results either from an honestly unsuccessful effort to balance the different departments, or from an effort to insure that the departments with low-priced help and machinery shall be so large that they will never fail to keep the more costly departments busy.

In Axminster Mill "A," the study showed that the "winding" and "picking" departments, which "feed" or are fed by the "weaving" and "setting" departments, each lost 31 per cent of their working time during the four-year period from April, 1911, to April, 1915. Yet the weaving department lost only 23 per cent and the setting department lost only 19 per cent of the working time. These figures indicate that unemployment is being created in the winding and picking departments because they are too large for the others.

8. Stock Taking

A large percentage of the textile firms lose from one to three weeks' time a year in taking stock. Many of the payroll curves

of individual concerns in the textile industry indicate that shutdowns for one or two weeks a year are quite common in the textile industry. In fact, many firms lost from one to three weeks a year taking stock. Side by side with these firms in similar lines of the same industry, are those which avoid, by a variety of devices, the loss of any time at all through the taking of stock.

It should be remembered that many concerns' lost time that is credited to stock taking is really due to lack of orders.

9. Limitation of the Amount an Employe is Allowed to Earn Each Week

In many mills an employe is not permitted to earn more than so much a week. Either he must go home after earning that amount or else he must dawdle around the plant, pretending to work. In some cases, this rule is put in force by the employer with the hope that, by thus distributing the work over a larger number, a larger labor reserve is kept available for his particular plant. In other cases, it is a rule promulgated by labor unions who either want what work there is distributed over all in the trade, or who fear that if ability to produce a larger output is shown, the price rate will be cut down. The result in either case is the same.

One of the largest employing concerns in Philadelphia places a limit on the amount that employes in certain departments may earn. Investigation showed that in a two-weekly payroll sheet of a large hosiery firm in Philadelphia, 31 of 69 piece workers in the pressing department earned within five cents of $36. Since these employes were not allowed to go home early, a good many trips to the water cooler must have been involved.

10. Frequent Changes in Standard Daily Production Policy of Factories According to Volume of Orders in Sight

One Philadelphia concern, employing many thousands of men, regulates the laying off of help by the total volume of business booked so many weeks ahead. Running a plant by such an arithmetical rule means that production will be as irregular as orders, and necessarily implies great irregularity in employment. Within a six weeks' period in 1908, this firm laid off 60 per cent of its help.

The methods of the shoe firm, mentioned above, in eliminating

the two to four weeks of annual unemployment are described by this firm:

Frequent changes in standard daily production policy of factories, according to volume of orders in sight.

NOTE. Many factories have no standard daily production basis, but change frequently, taking on or laying off help as needed. Roughly estimated, this causes unemployment of from two to four weeks per annum, in many cases much more.

How Improved:

1. By adopting and holding absolutely to a uniform standard daily production basis for each factory. Many of our factories have run for a period of several years, putting into the factory each day a production varying not over one per cent.

2. When orders do not in a monthly period or block equal the factory capacity, by filling in with special stock goods in small quantities, to be distributed through the special department previously mentioned.

3. When goods needed to fill monthly delivery blocks are necessary, by asking distributors to send in orders on staples to fill shortages.

11. MANUFACTURE TO STOCK

One of the most common methods,—so obvious as hardly to need mentioning,—adopted to assure steadiness of employment, is the practice of using the dull seasons to manufacture to stock, where the product is of a nature that does not lose value through being stored. When the main product cannot be stored, firms frequently use the slack period to make up a special product.

12. MISCELLANEOUS PRACTICES BY EMPLOYERS WHICH LESSEN OR INCREASE THE BURDEN OF UNEMPLOYMENT

a. Giving Notice of Lay-off. Where the periods at which help is laid off are fairly regular, and can, therefore, be predicted in advance, it is not too much to ask employers to give notice beforehand of the date on which such lay-off shall take place. This plan is perhaps best adapted to department stores, where it is known long in advance that a certain percentage of hands will be laid off at certain periods. In most department stores, however, this practice is not followed; and extra help is hired under the agreement that it may be laid off without notice.

b. Dovetailing of Trades. Where there is a regular seasonal laying-off and taking on of help, there are possibilities of regular

seasonal transfers between firms whose busy seasons and slack seasons dovetail. This "dovetailing of trades" is almost unknown.

A printing firm (outside of Philadelphia) with a maximum demand for help in the summer months, writes, as follows, of a plan it has in mind for the regular exchange of help between itself and a neighboring department store:

> What we had in view was to have an evening school of instruction so that a selected group of girls from our firm could be trained for the work required from sales girls in a department store.
>
> There is a civic association in this town where they have evening classes. I believe they teach domestic science, millinery, sewing, etc., and I see no reason why it would not be perfectly practical for arrangements to be made so that a competent person from a department store could teach a class how to make out the sales slip, to meet customers and the best methods of doing the required work.
>
> I hope some time that this will be tried out. Undoubtedly it would be much easier to bring this about if two plants were near to the homes of the workers. We are fourteen miles from the department store, and most of the women employes live in this town and they do not like the work in the department store on account of both the carfares and the time required to make the trip.

This practice would tend toward continuity of employment to employes and would insure the retention of trained help by each concern. A few firms, when it is necessary to lay off help, assume responsibility for securing new positions for them. This represents an ideal attitude on the part of such business firms. A general adoption of this practice would do much to assist in the dovetailing of trades with its resulting advantages to both employers and employes.

c. Loans to Employes. A Philadelphia firm that manufactures shirtwaists has, for ten years, loaned money without interest or collateral to its employes. Assurance is asked that the money is not to be spent viciously; other than that, the company does not meddle in the employes' use of the loans. It is a significant commentary that this firm has never lost a dollar during the entire ten years, through failure of employes to return what was borrowed—and the firm employ several hundred workers.

d. Retaining all of the Employes' Time at Fractional Productivity. It is the practice in some textile mills for a man to operate two or more looms. In dull times the employe is allowed to run one loom only. Thus, although the employe is working only at half or at third capacity and wages, he is forced to spend all of

his time in the mill. If the weaver were allowed to run all of his looms when in the factory, he would make just as much, and at least have a holiday out of his unemployment in which he could rest, pick up odd job here and there, or seek steadier work. The firm undoubtedly follows this practice so as to "hold" on to its employes. It is a practice, however, which even the "benevolent" argument—"by this means we keep them out of saloons"—cannot justify.

e. Enforcing Needless Expense on Employes During Periods of Unemployment. One of the largest of the employing concerns in and around Philadelphia has a factory located over ten miles from the homes of most of its workers. Although for a year the firm has been running to a very small percentage of its capacity, it has required all employes to report at least once a week to the office of the plant ten miles away regardless of whether there was any work to be done or not. Employes who did not so report were laid off the list of those nominally on the payroll. This rule required a weekly carfare expenditure of ten or fifteen cents each way. Thirty, or even twenty cents a week is a very severe drain on the resources of a man who has been working little or none for over a year. The company had offices near the homes of its workers where reporting could easily have been done, if necessary. The carfare expense might thus have been avoided. Imposing such a needless burden is evidence of a criminal lack of responsibility on the part of that individual firm.

f. Part-Time Employment. Permanent part time employment has already been condemned (p. 59). As an emergency measure to distribute employment in conditions of unusual stress, it can often be of great service. The head of a Philadelphia concern employing several thousand men writes as follows:

> Employers can do much to reduce the amount of unemployment. Managers of active manufacturing business can and should make employment much more steady than has too frequently been the case, and can use perfectly legitimates means to reduce to a minimum fluctuations in the number of employes due to times of industrial depression. Employers owe a duty to their employes, to their stockholders and to society to keep their working forces intact, active and well content, and the strongest possible measures should be used to this end.
>
> One of the most important means to this end was freely practiced during a period of depression and hardship which occurred during the winter just closing, in that it was found possible to take the amount of work available in a very de-

pressed period and spread it and the wages consequent upon this work over as many *families* as possible, thus distributing the money available for wages, even though in smaller quantities per unit, over a larger number of individuals, and keep them from absolute unemployment to a greater degree than would have occurred had the same amount of wages been spread over a smaller number of employes working practically full time.

It is fully recognized that this is not good manufacturing efficiency, but it was deemed a humanitarian measure to be executed in times which were very hard for both employer and employed. It is certain that the employes who experienced this form of coöperation appreciated what was being done, and all seemed willing to assist to the fullest degree. Naturally, there was no discussion of these measures—they were simply tried and found to be useful and successful.

Apropos of the same point, another employer writes:

At times of industrial depression the working force should not be cut down except only under such extraordinary conditions as may be forced upon the industry, which are absolutely beyond its control. When there is not enough work to keep the entire working force steadily employed, the number of hours of employment should be reduced equally throughout the whole organization. If all managers realized their duty in this respect, both to their organization and to the community, there would be very little, if any, aggravation of the problem of unemployment during periods of industrial depression.

Where part time is necessary, many employers can, without difficulty, so arrange the working time that the burden of unemployment can be considerably lessened. For example, if the worker is allowed to work full time for several days, then take several days completely off, he is in a better position to make some use of his idle time than if he worked every day at fractional time.

g. Times of payment. One concern interprets the rule that firms pay their help every two weeks as meaning "every two weeks of completed service." In other words, this concern pays only after an employe has worked for twelve days even though that twelve days may be distributed over a six, eight or twelve weeks' period, as it is during slack periods. As a matter of fact, this firm is decidedly irregular, so that this is frequently the case. Earnest and dignified protests from conservative business associates have been repeatedly ignored.

PART V

THE DUTY OF THE GOVERNMENT

Since the city cannot afford to permit its citizens to live subnormal lives, it is the business of the government to leave no stone unturned in dealing with unemployment. It has already been pointed out that the appropriations of public money for relief purposes can be justified only in extreme distress.

Municipal Work

The feeling that the city government should, if possible, relieve unemployment, coupled with the idea that the city could expand its income at will has led many to assume that public work should be used to fill up the low points of employment in private work. It is argued that city work should be saved up until such times as it will tend to fill the gaps in employment. Unquestionably, it is the duty of the municipality, as well as other branches of government, to do this so far as possible. However, so far as the municipality is concerned, the value of public work as a means of meeting unemployment has been very greatly exaggerated. Practically the only work which the city can, to any extent, pile up, is its contract work. But the amount of money annually spent by Philadelphia for city contracts is small. In 1914, the value of contract work done for the city was about $12,000,000. Of this, over $2,000,000 was appropriated for services which must be performed regularly through the year—such as street cleaning, garbage, ash collection, etc. Of the remaining contracts, representing only $10,000,000, one-half is spent to purchase supplies of various kinds—chiefly coal, lumber, and groceries. While, undoubtedly, the hastening of purchases of public supplies would be of help in creating employment during periods of stress, and should be done as one of the best ways the city government can help, yet its influence will be but slight. Of the remaining $5,000,000, the majority consists of paving, resurfacing and similar work, which can not readily be done in winter when employment is most serious. Only a small part of the city work, such as the clearing up of the meadows in South Philadelphia for park use and building the

bulkheads along the Schuylkill, can be done in winter. If $1,000,000 worth of contract work could be saved annually to be done at emergency periods it could not, after materials had been bought, furnish employment to 15,000 persons for a month even at low rates. It would furnish little, if any, more employment than would be furnished during a year by a firm with 700 employes. It must furthermore be considered that a majority of the unemployed are persons whose sex, previous work, environment or physical incapacity make them unable to do the heavy out-door construction work that the city would chiefly have to offer. Even without taking into account the difficulty of doing many kinds of city work in the middle of winter, the minor value of municipal work as a means of meeting serious unemployment, is apparent. Obviously, one employing concern, even though it be the city government, can do little to handle the unemployment problem of the 50,000 employing concerns in Philadelphia. It is folly to comfortably delude ourselves into believing that a better distribution of municipal work affords a solution to our entire problem.

Despite this fact, however, a fundamental obligation *does* rest upon the legislative and executive branches of the city government to regard and make use of everything in municipal work which may affect unemployment. As much public work as is possible should be done at times when business is slack, but under the *usual business conditions*. Their fifty years' experience in dealing with unemployment has taught European countries that simonpure relief employment, *i.e.*—work especially made to furnish employment and conducted at low efficiency, and with little set standard of efficiency, is bad policy, save as a last resort. "Relief" work, as such, is more costly to the city than work done under normal conditions, despite the economy advantage frequently claimed because of lower wages and cheaper materials. The policy usually characteristic of relief work—that of paying a wage from one to ten times as great as that actually earned—is as degrading and degenerating in its effect on the jobless man as is the mere hand-out of funds. Relief work is still further to be objected to on the grounds that, by providing no standard of competence, it opens an easy way for a corrupt administration to justify endlessly its own excessive expenditure and avoid the proper safeguards of the civil service law. Finally, relief work, even if capable of suc-

cessful administration, is inadequate since it deals only with the resultant human suffering without touching the industrial disorganization responsible for it.

Therefore, whatever contribution the municipality makes by supplying public work should be done under the normal or approximately normal business methods.

With these conditions imposed, a municipal policy, which will reserve public work not of a pressing nature until the time of emergency, and which will assure the rapid starting of such work when needed, should be adopted by each successive incoming administration.

In addition to this the municipality can assist by doing many things of a minor nature which will assist in solving the unemployment question.

Just as any individual employer has an obligation (not always possible to attain) to furnish steady employment the year round, so should the municipality adopt the policy of all-the-year-round work for strictly municipal employes. This policy has been adopted in Wellesley, Mass.

The city should see to it that work and employment given out by such a tremendous construction operation as the building of the new subway system, should be doled out as regularly as possible. When that work draws to a close, it should taper down gradually so that an army of thousands of men should not be thrown on the city at once and the city's industries expected to absorb them instantly, as was the case in the building of the New York subway system.

Finally, the municipality should have some place, perhaps a new municipal farm with quarry attached, where residents of Philadelphia, who are unable to find work, can be temporarily employed after the public employment bureau has granted a certificate of character and worthiness. During the past winter, many men were found, in order to secure assistance from the city, to have had themselves committed to the House of Correction. Many of these were doubtless looking for a warm place without too much tiresome muscular acitvity. However, many were perfectly sincere in their desire for work. There is no reason why the city should not have a separate farm with a quarry attached which would help supply municipal needs. To this farm, citizens of

Philadelphia, capable of doing hard out-door work, could be admitted upon certificate of the public employment bureau, without stigma of disgrace, and work at a normal degree of efficiency and at a wage which would not encourage the permanency of such an occupation. Some limit should be placed on the length of time a person might be allowed to remain at such a farm.

A Municipal Employment Bureau

One of the most obvious duties of the city government is the establishment of a municipal employment bureau. The primary function of such a bureau would be to assist in bringing men out of work into quick and easy communication with employers needing help. At present the responsibility for finding a new job rests almost entirely upon the man out of work. With little or no systematized help for the worker, the well-known hope-killing, degenerating process of hunting a job results. Under existing conditions the need for such a bureau as a labor clearing house is very real. It should be recognized that the ideal and eventual solution is, not to have men change their jobs no matter how cheaply or efficiently, but to have them remain steadily employed in their present jobs. The present chaotic condition of labor turnover in most factories has accentuated the present need and exaggerated the ultimate value of public employment bureaus.

At present, the man out of work seeks a new position through one or more of five chief methods.

1. Inserting and answering newspaper ads.
2. Applying to the business agent of his union.
3. Applying at a private employment bureau or at the employment bureau conducted by organizations of employers in certain trades.
4. By means of introductions by friends.
5. By tramping the streets, applying at random.

The inadequacy of these methods for meeting the whole situation is almost too obvious to point out. If the man out of work answers newspaper ads, he is apt to find that he has arrived too late, or that as a result of the vagueness of the newspaper description, he has applied for a job for which he is not fitted. To insert an advertisement involves an expense that cannot well be stood by

the person unemployed and is frequently not justified by results. Members of unions which include in their membership a high percentage of the trade, are in a much better position to be assisted to a new work if there is any. The fact is, however, that but a small percentage of the wage-earners belong to unions, and the majority are, therefore, not in a position to profit by the union activities. The man out of work can use a private employment bureau, but each of these covers only a small corner of its particular field, so that it may or may not know where there is a suitable job. Moreover, if he secures a position, the applicant must pay a fee ranging from $1 up. Even if no job is forthcoming, a fee of 50 cents is usually charged. Finally, the private employment bureaus make little analysis of positions with a view to fitting the men accurately so that satisfaction and permanence of employment shall be assured.

Applying at random for work, or where "help wanted" signs announce the need for new help frequently means a hope-killing, all-day hunt for a job that does not exist or else it means walking all around a job without finding it. The business of finding jobs is so unsystematic that hunting work, in a large percentage of cases, is very much like a game of "blind man's buff," with the hunt extending all over the city and even farther.

The stories of one day's experiences told by an employe selected at random in an Axminster carpet mill, show how extravagant, discouraging and inefficient are the prevailing means of seeking work and how immeasurably superior it would be if all, or as much as possible of the work of job-hunting, could be centralized in one free public employment bureau—which should be a great labor clearing house for the entire city. This man, who was young and unmarried and a day laborer, had been employed at the ——— hat factory. In the middle of February he was laid off with 24 others because of a lack of work. He remained unemployed till Easter. He was told that he would be taken on at the hat factory when times were better. The new employer gave him a good recommendation as to ability and steadiness. He reports that he had enough "rainy day" money saved up so that it lasted during his period of unemployment. He described one day's travel in search for a job as follows:

I got up at 5.30 and went to Baldwin's and was told no help was required. From there, I went to Hale & Kilburn at 18th and Lehigh Avenue and met with the same answer. I then walked to 2d and Erie Avenue to Potter's Oil Cloth Works, and they needed no help. Then to the Hess Bright Company, at Front and Erie Avenue, and again met with the same result. Next I came back home at 2d and Lehigh Avenue for a meal. In the afternoon, I went to Edward Bromley's; no help needed; from there to a firm at American and Girard Streets, with the same result. Then I called at the Barnett File Works, again with the same result. I tried two other places in the neighborhood, whose names I have forgotten, and none had any work. Often I would go out and after meeting with bad luck day after day, would say to myself at night, "the job has got to find me," but the next morning I would feel differently about it.

In all this man walked approximately 186 squares in this one day. The path covered by this man this day is shown in fig 26.

The function of a public employment bureau should not be interpreted, as it frequently is, as a cure for unemployment. It does not create jobs. Only in indirect roundabout ways does it tend to cure unemployment. It can, however, greatly improve the situation of the unemployed by effecting quickly and cheaply the transition from one job to another. When the business of securing work for idle workers shall have been concentrated in public employment bureaus to the degree which it is in Germany, the dispiriting, aimless, inefficient hunt for a job by thousands of individual unemployed workers should be a thing of the past.

The bureau should bring about a "dovetailing" between industries which require similar kinds of labor and in which the "off-season" of one corresponds with the "on-season" of another, as in the case mentioned (on page 88) of the printing concern and a department store. Such a plan would assure the retention of skilled workers by the firm and contribute to continuity of employment.

In other ways, the bureau can coöperate with employers to reduce the irregularity of employment in certain industries. The extreme irregularity of employment among Philadelphia's 4,000 dock workers has already been indicated. The unemployment arising from the over-crowding of the dock working trade in Liverpool has been largely reduced by an agreement entered into by the stevedores and shipping concerns and the public employment bureau. This agreement provides for common clearing houses along the docks from which firms employing such labor secure their

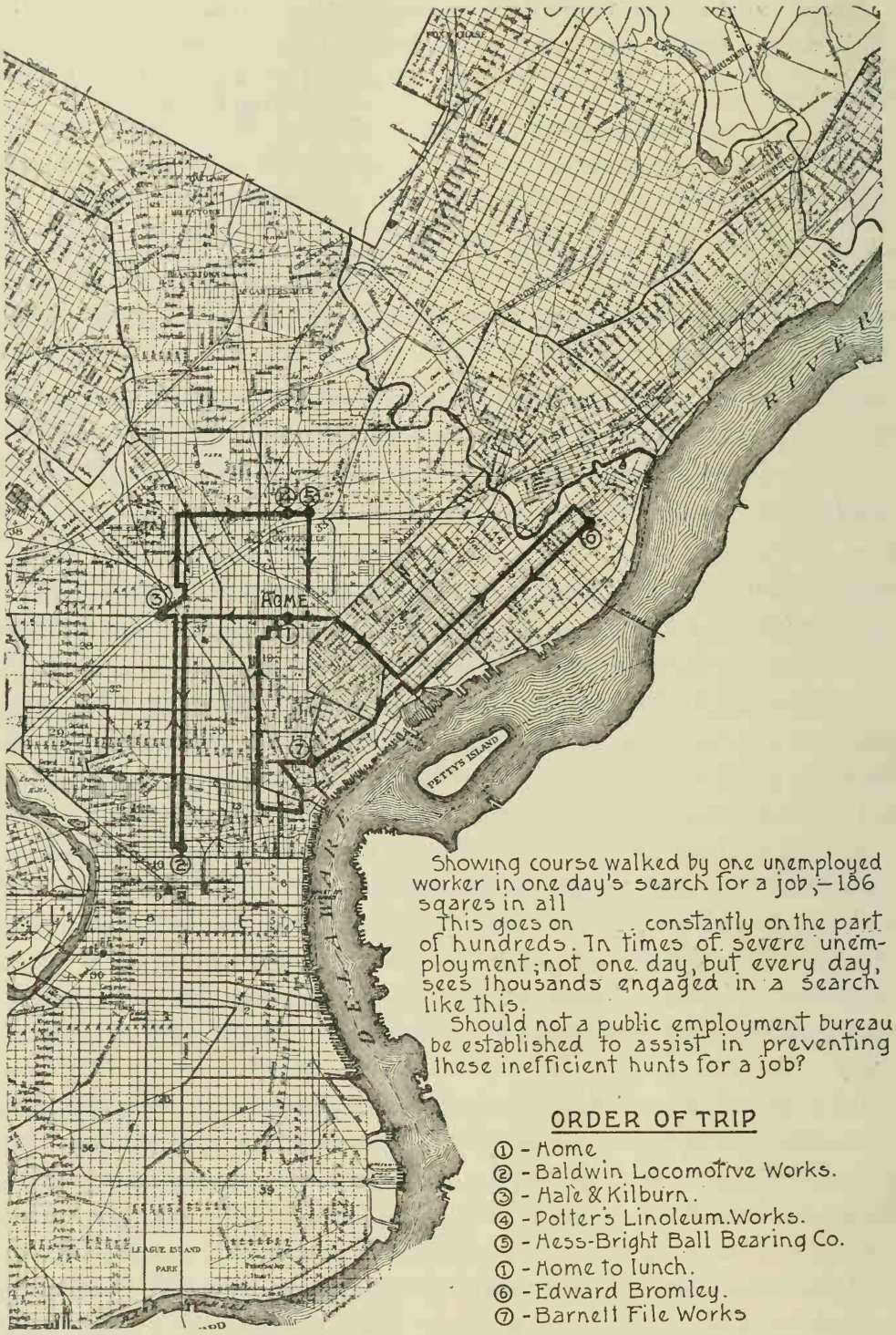
HOME
PETTY'S ISLAND
DELAWARE RIVER
LEAGUE ISLAND PARK
Showing course walked by one unemployed worker in one day's search for a job;—186 sqares in all
This goes on constantly on the part of hundreds. In times of severe unemployment; not one day, but every day, sees thousands engaged in a search like this.
Should not a public employment bureau be established to assist in preventing these inefficient hunts for a job?
ORDER OF TRIP
① - Home
② - Baldwin Locomotive Works.
③ - Hale & Kilburn.
④ - Potter's Linoleum Works.
⑤ - Hess-Bright Ball Bearing Co.
① - Home to lunch.
⑥ - Edward Bromley.
⑦ - Barnett File Works

FIGURE 26

help. When a call for workers comes, the officials of the clearing houses choose those who have been longest in the trade, all other things being equal. Thus an automatic limitation (as well as certain other artificial limitations) is placed on the entrance of newcomers into the trade. This reduces the over-crowding and consequent unemployment among dock workers. Some similar plan would be of advantage to Philadelphia. The public employment bureau should work out the details of such a scheme and secure the coöperation of employers and the large share of government support necessary for such a plan.

The Philadelphia employment bureau should be more than an employment bureau. It should be the official headquarters for the community's steady fight against unemployment. Its records and experience would constantly throw light on the problem. This information should be published and freely distributed to every agency that is interested in the subject.

The bureau should coöperate with educational institutions, giving advice, etc. The institutions in turn would help forward the investigation, and dissemination of facts about unemployment.

A future department of the bureau should be especially concerned with the question of vocational guidance of young people. An efficient employment bureau would be so intimately conversant with the conditions of the labor market in each trade and with the qualities required of the worker for success in that trade that it should be able to offer and should maintain facilities for giving advice to young people about to enter industry and older persons who contemplate shifting from one trade to another. In conjunction with the Vocational Training Department of the Board of Education, information regarding the opportunity or lack of opportunity, as well as the requirements of particular trades, should be published in pamphlet form for the benefit of teachers, parents and others in a position to advise young persons about to enter industry. The need for work of this kind can be illustrated by the situation in the lace business. Here, despite the fact that the 300 or 400 lace weavers now in the business are a much larger number than the industry can keep anywhere near busy, there are approximately 100 boys and young men who, either as formal apprentices or in some other capacity, are now in line, hoping to enter the lace weavers' trade.

Since progress in reducing unemployment will necessarily be slow—as one man puts it—"will last us a thousand years"—Philadelphia should look forward to the adoption, on either a state or city basis, of some form of insurance for wage-earners against unemployment—such as is in vogue in many of the countries of Europe. In essence, this simply means that the government, the employer and the employe shall contribute so much per week to a common fund from which certain sums shall be paid out to those insured when unemployed. This insurance fund is usually administered by the public employment bureaus who offer work first, if it is available. The function of administering unemployment insurance will fall upon the local bureau. This insurance cannot, however, be practically adopted until after the labor market has been organized and the procuring of jobs sufficiently centralized in the bureau. This is necessary so that the bureau may be in a position to ascertain that there really is no work before unemployment insurance shall be granted.

A committee of the American Association of Labor Legislation, working in conjunction with the State Department of Labor and Industry and the Department of Public Works, secured the passage in June, 1915, of laws providing for a state system of public employment bureaus. One of the functions of this system of public employment bureaus is the regulation of private employment bureaus. By the terms of these acts, provision is made for the establishment and operation of a public bureau in any city by the joint authority of the city and state. Plans are now on foot for the establishment of such a joint bureau in Philadelphia. As soon as Councils convene in the fall of 1915, an ordinance should be introduced authorizing the coöperation of the city authorities. In fact, the state has already started such a bureau. It is desired that the federal department of immigration, which now supports a public employment bureau in Philadelphia, can be induced to join in to help make one large bureau in Philadelphia, thus avoiding needless duplication of work.

It is hoped that by thus joining the efforts of three government agencies in the support of one bureau, a common error and cause of failure in public employment bureaus shall be avoided—namely, insufficient funds to secure men of capability as superintendents, and to prosecute properly the duties of the bureau. Two

other requirements for an ideal bureau, which are, however, frequently overlooked, are (1) a central location, on the first floor and with plenty of space, and (2) the choosing of employes under civil service rule.

A Municipal Lodging House

A suggestion commonly made is that the city should support a municipal lodging house. An additional permanent lodging house in Philadelphia is unnessary since the Philadelphia Branch of the Society for Organizing Charity (up to the summer of 1915) permanently supports one wayfarers' lodge, at which 175 homeless men can find shelter and food in return for a small amount of work. In addition to this, two missions offered floors where homeless men could "flop" during the past winter. Up to this spring, the Society for Organizing Charity maintained two lodges with a total capacity of 275. On only a few nights during the severe winter just past were these lodges filled to capacity. The existence of one (the smaller one has been closed) of these lodges leads to the conclusion that an additional permanent municipal lodging house would simply encourage and attract those of the unemployed who are neither willing nor able to work. However, prevalent practice and opinion in the larger cities of the country recommends that such lodges for homeless men should be taken over by the city, in toto, from the private charities. This would make possible better regulation and higher standards in such work. In times of unusual stress, whenever the facilities of the lodges of the Society for Organizing Charity should become entirely inadequate, the city should make provisions for the supplying of temporary accommodations, as a number of business men headed by H. T. Saunders did this past winter, and just as did New York City when its regular municipal lodging house became inadequate. Provision for administering these temporary quarters might be made with some existing charities, if the work of furnishing accommodations to homeless men is left to the societies.

The Duty of the Consumer

The entire responsibility for dealing with unemployment cannot be shouldered off on to employers and the city government. Consumers should realize that by following extreme styles in clothes,

household furnishings, etc., they are making steady production difficult to the manufacturer, and are, therefore, contributing to unemployment.

They should also realize that when industry is slack, there rests upon the individuals the obligation to purchase as much and as widely as possible against future need, so that industry will be started up and employment again furnished. By "buying now," "hiring now," "repairing now," "building now," "cleaning up now," in slack times, both business firms, householders and individuals in general can contribute in the sanest way towards the relief of unemployment. A campaign along this line, similar to the Consumers' League "shop early" campaign, would be desirable. The Consumers' League is the logical agency to undertake such a campaign.

Employers should realize that the effect of every expenditure either for labor or materials in one firm or industry tends to spread and stimulate other industries whose improved prosperity reacts on the original firm or industry.

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